INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding a New Source Review and Part 70 Operating Permit for New Horizons Baking Company in Steuben County

Significant Source Modification No. 151-32848-00060
Part 70 Operating Permit No. T151-31292-00060

The Indiana Department of Environmental Management (IDEM) has received applications from the New Horizons Baking Company located at 700 W. Water Street, Fremont, Indiana 46737 regarding the transition from a Minor Source Operating Permit (MSOP) issued on May 10, 2010, to a Part 70 Operating Permit. If approved by IDEM's Office of Air Quality (OAQ), this proposed modification would allow the New Horizons Baking Company to make certain changes at its existing source. New Horizons Baking Company has applied to transition from its existing MSOP to a Part 70 Operating Permit, to update emission units for the Bun Line (Line A) and Muffin Line (Line B), to incorporate VOC emissions from proofing, to update the VOC emission factor for Line B based on stack testing performed November 2010, and to construct and operate a new muffin line (Line H).

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. In addition, some conditions from previously issued permits/approvals have been corrected, changed or removed. These corrections, changes, and removals may include Title I changes. IDEM has reviewed this application, and has developed preliminary findings, consisting of a draft permit and several supporting documents, that would allow the applicant to make this change.

IDEM is aware that various emission units may have been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. The draft Significant Source Modification and Part 70 Operating Permit contain provisions to bring unpermitted equipment into compliance with construction and operation permit rules.

A copy of the permit application and IDEM's preliminary findings are available at:

Fremont Public Library
3145 East North Street, P.O. Box 7
Fremont, IN 46737-0007

and

IDEM Northern Regional Office
300 N. Michigan Street, Suite 450
South Bend, IN 46601-1295

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

How can you participate in this process?
The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open. You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing,

IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to Significant Source Modification No. 151-32848-00060 and Part 70 Operating Permit No. T151-31292-00060 in all correspondence.

To Contact IDEM:
Jason R. Krawczyk
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension (3-0870)
Or dial directly: (317) 234-5174
Fax: (317) 232-6749 attn: Jason R. Krawczyk
E-mail: jkrawczyk@idem.in.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor or noise. For such issues, please contact your local officials.

For additional information about air permits and how you can participate, please see IDEM's **Guide for Citizen Participation** and **Permit Guide** on the Internet at: www.idem.in.gov.

What will happen after IDEM makes a decision?
Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251 and the IDEM Northern Regional Office, 300 N. Michigan Street, Suite 450, South Bend, IN 46601-1295.

If you have any questions please contact Jason R. Krawczyk of my staff at the above address.

Nathan C. Bell, Section Chief
Permits Branch
Office of Air Quality

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Part 70 Operating Permit
OFFICE OF AIR QUALITY

New Horizons Baking Company
700 West Water Street
Fremont, Indiana 46737

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions

Operation Permit No.: T151-31292-00060	
Issued by:	Issuance Date:
Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Expiration Date:

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary bread baking plant.

Source Address:	700 West Water Street, Fremont, Indiana 46737
General Source Phone Number:	(260) 495-7055
SIC Code:	2051 (Bread and Other Bakery Products, Except Cookies and Crackers)
County Location:	Steuben
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) bun line, identified as Line A, constructed in 1979, with a maximum throughput capacity of 7,700 pounds of bread per hour, and consisting of:

(1) One (1) natural gas-fired oven, identified as Unit A, with a maximum heat input of 4.60 MMBtu per hour, exhausting to Stack A; and

(2) One (1) proof box, identified as Line A Proof Box.

(b) One (1) muffin line, identified as Line B, constructed in 1983 and modified in 2008, with a maximum throughput capacity of 3,400 pounds of bread per hour, and consisting of:

(1) One (1) natural gas-fired muffin griddle, identified as Unit B, with a maximum heat input of 3.70 MMBtu per hour, exhausting to Stack B; and

(2) One (1) proof box, identified as Line B Proof Box.

(c) One (1) muffin line, identified as Line H, approved in 2013 for construction, with a maximum throughput capacity of 3,060 pounds of bread per hour, and consisting of:

(1) One (1) natural gas-fired muffin griddle, identified as Unit H, with a maximum heat input of 3.70 MMBtu per hour, exhausting to Stack H; and

(2) One (1) proof box, identified as Line H Proof Box.

(d) Two (2) flour storage silos, identified as Unit C1 and C2, each with a maximum storage capacity of 60 tons of flour and a throughput rate of 6,250 pounds of flour per hour plus twenty percent (20%) flour recovery, equipped with a pneumatic conveyance system, using fabric filters as control, constructed in 1979, and exhausting to Stacks C1 and C2, respectively.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) One (1) bun production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, bun mixer (weigh scale) hopper, bun mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, permitted in 1979, with a maximum throughput of 4,577 pounds of flour per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, installed in 1979, identified as hopper B1, with a capacity of 4,577 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(2) One (1) mixer, installed in 2010, identified as mixer B1, with a capacity of 7,700 pounds/hour, exhausting indoors.

(3) One (1) dusting hopper, installed in 1996, identified as hopper B2, with a capacity of 100 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(4) One (1) shaker, installed in 1996, identified as shaker B1, with a capacity of 100 pounds/hour (not including dough), equipped with a fabric filter (RF1) for flour recovery and reuse, exhausting indoors.

(b) One (1) muffin production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, muffin mixer (weigh scale) hopper, muffin mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, permitted in 1983, with a maximum throughput of 770 pounds of flour per hour and 100 pounds of cornmeal per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, installed in 1983, identified as hopper M1, with a capacity of 770 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(2) One (1) bag breaker, installed in 1983, identified as breaker M1, with a capacity of 100 pounds/hour, exhausting indoors.

(3) One (1) mixer, installed in 1997, identified as mixer M1, with a capacity of 3,400 pounds/hour, exhausting to the weigh hopper.

(4) One (1) shaker, installed in 2011, identified as shaker M1, with a capacity of 100 pounds/hour (not including dough), equipped with a fabric filter (RF2) for corn meal recovery and reuse, exhausting indoors.

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(c) One (1) muffin production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, muffin mixer (weigh scale) hopper, muffin mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, approved in 2013 for construction, with a maximum throughput of 693 pounds of flour per hour and 90 pounds of cornmeal per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, approved in 2013 for construction, identified as hopper M2, with a capacity of 693 pounds/hour, equipped with a fabric bag filter (RF3) for flour recovery and reuse, exhausting indoors.

(2) One (1) bag breaker, approved in 2013 for construction, identified as breaker M2, with a capacity of 90 pounds/hour, exhausting indoors.

(3) One (1) mixer, approved in 2013 for construction, identified as mixer M2, with a capacity of 3,060 pounds/hour, exhausting to the weigh hopper.

(4) One (1) shaker, approved in 2013 for construction, identified as shaker M2, with a capacity of 90 pounds/hour (not including dough), equipped with a fabric filter (RF3) for corn meal recovery and reuse, exhausting indoors.

(d) Production related activities, including the following:

(1) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6.

(A) One (1) cold cleaning degreasing operation with a remote reservoir, constructed in 2002. [326 IAC 8-3]

(2) Cleaners and solvents characterized as:

(A) having a vapor pressure equal to or less than two (2.0) kilo Pascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pound per square inch) measured at thirty-eight (38) degrees Centigrade (one hundred (100) degrees Fahrenheit); or

(B) having a vapor pressure equal to or less than seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty (20) degrees Centigrade (sixty-eight (68) degrees Fahrenheit);

the use of which, for all cleaners and solvents combined, does not exceed on e hundred forty-five (145) gallons per twelve (12) months.

(e) Combustion related activities, including the following:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(i) One (1) natural gas-fired Hurst boiler, identified as Unit D, constructed in 1979, with a maximum heat input capacity of 2.60 MMBtu per hour, and exhausting at Stack D.

(ii) One (1) natural gas-fired Kewanee boiler, identified as Unit E, constructed in 1996, with a maximum heat input capacity of 1.80 MMBtu per hour, and exhausting at Stack E.

(iii) Six (6) natural gas-fired space heaters, identified as F1 through F6, each with a maximum heat input of 0.10 MMBtu per hour, and installed in 1979.

(iv) Two (2) natural gas-fired space heaters, identified as F7 through F8, each with a maximum heat input of 0.10 MMBtu per hour, both installed in 1979.

(v) Four (4) natural gas-fired space heaters, identified as F9 through F12, each with a maximum heat input of 0.10 MMBtu per hour, each installed in 2004.

(f) Activities associated with emergencies, including the following:

(1) One (1) 5.36 HP natural gas-fired emergency generator, identified as Unit G, constructed in 1983, and exhausting to Stack G.

Under NESHAP ZZZZ, this unit is considered an affected emission unit.

(g) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons:

(A) One (1) 50-gallon hydraulic oil tank, identified as HD-1 Oven, constructed in 1979;

(B) One (1) 35-gallon hydraulic oil tank, identified as HD-2 Developer, constructed in1978;

(C) One (1) 15-gallon oil tank, identified as GL-1 Griddle, constructed in 2009;

(D) One (1) 1-gallon lube oil tank, identified as PRO-1 Proofer, constructed in 1996;

(E) One (1) 1-gallon HT2000 storage tank, identified as Oven-1, constructed in 1989;

(F) One (1) 10-gallon solvent storage tank, identified as Maintenance Solvent 1, constructed in 1984;

(G) One (1) 1-gallon Volcool VNT700 storage tank, identified as Water Soluble, constructed in 1985; and

(H) One (1) 55-gallon lube oil tank, identified as K-Lub, constructed in 1984.

(h) Paved and roads and parking lots with public access.

A.4 Other Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities which are not specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Production related activities, including the following:

(1) Application of:

(A) oils;

(B) greases; and

(C) lubricants

as temporary protective coatings.

(2) Machining where an aqueous cutting coolant continuously floods the machining interface.

(3) Maintenance welding.

(4) Closed loop heating and cooling systems.

(b) Solvent recycling systems with batch capacity less than or equal to one hundred (100) gallons.

(c) Water based activities, including the following:

(1) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.

(2) Noncontact cooling tower systems with either of the following:

(A) Forced and induced draft cooling tower systems not regulated under a NESHAP.

Oil, grease, or VOC content shall be determined by a test method acceptable to the department and the U.S. EPA.

(d) Repair activities, including the following:

(1) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.

(e) Blowdown for the following:

(1) Boiler.

(2) Cooling tower.

(3) Compressors.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

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SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

(a) This permit, T151-31292-00060, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.4 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.5 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.6 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.8 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(34).

B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

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(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

B.11 Preventive Maintenance Plan [326 IAC 2-7-5(12)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T151-31292-00060 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this combined permit, all previous registrations and permits are superseded by this combined new source review and part 70 operating permit.

B.15 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit.
[326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

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B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.25 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

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SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

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C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

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(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than 180 days from the date on which this source commences operation.

The ERP does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.13 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application.

Support information includes the following:

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.

(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

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SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

(a) One (1) bun line, identified as Line A, constructed in 1979, with a maximum throughput capacity of 7,700 pounds of bread per hour, and consisting of:

(1) One (1) natural gas-fired oven, identified as Unit A, with a maximum heat input of 4.60 MMBtu per hour, exhausting to Stack A; and

(2) One (1) proof box, identified as Line A Proof Box.

(b) One (1) muffin line, identified as Line B, constructed in 1983 and modified in 2008, with a maximum throughput capacity of 3,400 pounds of bread per hour, and consisting of:

(1) One (1) natural gas-fired muffin griddle, identified as Unit B, with a maximum heat input of 3.70 MMBtu per hour, exhausting to Stack B; and

(2) One (1) proof box, identified as Line B Proof Box.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (BACT) and SSM 151-32848-00060, the best available control technology (BACT) has been determined to be the following for the muffin line (Line B):

(a) VOC emissions from the muffin line, identified as Line B (consisting of the muffin griddle (Unit B) and the proof box (Line B Proof Box)), shall not exceed 35.16 tons per twelve (12) consecutive month period.

(b) The source shall operate Line B (consisting of the muffin griddle (Unit B) and proof box (Line B Proof Box)) in accordance the manufacturer's design and operating specifications.

(c) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box (Line B Proof Box) and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

Weekly Cleaning Procedure:

(1) Clean inner housing top and bottom using a hand brush and knife scraper;
(2) Clean inner conveyor shafts and bearing housings. Use a clean cloth for removal of residual debris and any bearing over lubrication;
(3) Clean inner door ledge framework using a hand brush and clean cloth;
(4) Wash inner housing;
(5) Wash inner conveyor shafts and bearing housings;
(6) Wash inner door ledge framework;
(7) Clean debris from lower proofer doors using a hand brush and clean cloth. If there are problem areas on the doors, a knife scraper can be used to remove encrusted debris.
(8) Wash lower proofer doors.

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D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for the bun line (Line A) and muffin griddle (Line B) facilities. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.3 Volatile Organic Compounds

Compliance with the VOC limit contained in Condition D.1.1(a) shall be determined by the following equation:

$$\text{VOC} = \sum_{m=1}^{12}\left(\left(\frac{(Ef+1)*D}{2000lbs/ton}\right)+0.007\right)_m$$

Where:
D = The amount of baked product produced during month m (tons/month);
E_f = The VOC emission factor (lb of VOC/ton of baked product);
m = The compliance period is one (1) calendar month.

The Permittee shall use 3.71 lbs VOC/ton for the emission factor (E_f), or the emission factor determined from a valid compliance demonstration, as required by Condition D.1.5, which results in an emission factor higher than 3.71 lbs VOC/ton.

D.1.4 Testing Requirements

Not later than 60 days after a change in the dough formulation of the muffins, which is expected to result in an increase of VOC emissions, the Permittee shall perform VOC testing of the one (1) muffin griddle, identified as Unit B, utilizing methods approved by the commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.5 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1(a) and D.1.3, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.1.1(a).

(1) The dates of the compliance period;

(2) The amount of baked product produced during each compliance period;

(3) The VOC emission factor used (lb of VOC/ton of baked product); and

(4) The weight of VOCs emitted for each month and each compliance period.

(b) To document the compliance status with Condition D.1.1(c), the Permittee shall maintain records of the cleaning operations for the proof box (Line B Proof Box). The Permittee shall include in its record when a cleaning operation was not performed and the reason for the lack of cleaning operations.

(c) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.1.6 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1(a) and D.1.3 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1(34).

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SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

(c) One (1) muffin line, identified as Line H, approved in 2013 for construction, with a maximum throughput capacity of 3,060 pounds of bread per hour, and consisting of:

(1) One (1) natural gas-fired muffin griddle, identified as Unit H, with a maximum heat input of 3.70 MMBtu per hour, exhausting to Stack H; and

(2) One (1) proof box, identified as Line H Proof Box.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (BACT) and SSM 151-32848-00060, the best available control technology (BACT) has been determined to be the following for the muffin line (Line H):

(a) VOC emissions from the muffin line, identified as Line H (consisting of the muffin griddle (Unit H) and the proof box (Line H Proof Box)), shall not exceed 31.65 tons per twelve (12) consecutive month period.

(b) The source shall operate Line H (consisting of the muffin griddle (Unit H) and proof box (Line H Proof Box)) in accordance the manufacturer's design and operating specifications.

(c) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box (Line H Proof Box) and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

Weekly Cleaning Procedure:

(1) Clean inner housing top and bottom using a hand brush and knife scraper;
(2) Clean inner conveyor shafts and bearing housings. Use a clean cloth for removal of residual debris and any bearing over lubrication;
(3) Clean inner door ledge framework using a hand brush and clean cloth;
(4) Wash inner housing;
(5) Wash inner conveyor shafts and bearing housings;
(6) Wash inner door ledge framework;
(7) Clean debris from lower proofer doors using a hand brush and clean cloth. If there are problem areas on the doors, a knife scraper can be used to remove encrusted debris.
(8) Wash lower proofer doors.

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for the muffin griddle (Unit H) and the proof box (Line H Proof Box). Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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Compliance Determination Requirements

D.2.3 Volatile Organic Compounds

Compliance with the VOC limit contained in Condition D.2.1(a) shall be determined by the following equation:

$$\text{VOC} = \sum_{m=1}^{12}\left(\left(\frac{(Ef+1)*D}{2000lbs/ton}\right)+0.007\right)_m$$

Where:
D = The amount of baked product produced during month m (tons/month);
E_f = The VOC emission factor (lb of VOC/ton of baked product);
m = The compliance period is one (1) calendar month.

The Permittee shall use 3.71 lbs VOC/ton for the emission factor (E_f), or the emission factor determined from a valid compliance demonstration, as required by Condition D.2.5, which results in an emission factor higher than 3.71 lbs VOC/ton.

D.2.4 Testing Requirements

Not later than 60 days after a change in the dough formulation of the muffins, which is expected to result in an increase of VOC emissions, the Permittee shall perform VOC testing of the one (1) muffin griddle, identified as Unit H, utilizing methods approved by the commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.5 Record Keeping Requirements

(a) To document the compliance status with Conditions D.2.1(a) and D.2.3, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.2.1(a).

(1) The dates of the compliance period;

(2) The amount of baked product produced during each compliance period;

(3) The VOC emission factor used (lb of VOC/ton of baked product); and

(4) The weight of VOCs emitted for each month and each compliance period.

(b) To document the compliance status with Condition D.2.1(c), the Permittee shall maintain records of the cleaning operations for the proof box (Line H Proof Box). The Permittee shall include in its record when a cleaning operation was not performed and the reason for the lack of cleaning operations.

(c) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.2.6 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.2.1(a) and D.2.3 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1(34).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

(d) Two (2) flour storage silos, identified as Unit C1 and C2, each with a maximum storage capacity of 60 tons of flour and a throughput rate of 6,250 pounds of flour per hour plus twenty percent (20%) flour recovery, equipped with a pneumatic conveyance system, using fabric filters as control, constructed in 1979, and exhausting to Stacks C1 and C2, respectively.

Insignificant Activities:

(a) One (1) bun production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, bun mixer (weigh scale) hopper, bun mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, permitted in 1979, with a maximum throughput of 4,577 pounds of flour per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, installed in 1979, identified as hopper B1, with a capacity of 4,577 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(2) One (1) mixer, installed in 2010, identified as mixer B1, with a capacity of 7,700 pounds/hour, exhausting indoors.

(3) One (1) dusting hopper, installed in 1996, identified as hopper B2, with a capacity of 100 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(4) One (1) shaker, installed in 1996, identified as shaker B1, with a capacity of 100 pounds/hour (not including dough), equipped with a fabric filter (RF1) for flour recovery and reuse, exhausting indoors.

(b) One (1) muffin production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, muffin mixer (weigh scale) hopper, muffin mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, permitted in 1983, with a maximum throughput of 770 pounds of flour per hour and 100 pounds of cornmeal per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, installed in 1983, identified as hopper M1, with a capacity of 770 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(2) One (1) bag breaker, installed in 1983, identified as breaker M1, with a capacity of 100 pounds/hour, exhausting indoors.

(3) One (1) mixer, installed in 1997, identified as mixer M1, with a capacity of 3,400 pounds/hour, exhausting to the weigh hopper.

(4) One (1) shaker, installed in 2011, identified as shaker M1, with a capacity of 100 pounds/hour (not including dough), equipped with a fabric filter (RF2) for corn meal recovery and reuse, exhausting indoors.

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(c) One (1) muffin production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, muffin mixer (weigh scale) hopper, muffin mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, approved in 2013 for construction, with a maximum throughput of 693 pounds of flour per hour and 90 pounds of cornmeal per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, approved in 2013 for construction, identified as hopper M2, with a capacity of 693 pounds/hour, equipped with a fabric bag filter (RF3) for flour recovery and reuse, exhausting indoors.

(2) One (1) bag breaker, approved in 2013 for construction, identified as breaker M2, with a capacity of 90 pounds/hour, exhausting indoors.

(3) One (1) mixer, approved in 2013 for construction, identified as mixer M2, with a capacity of 3,060 pounds/hour, exhausting to the weigh hopper.

(4) One (1) shaker, approved in 2013 for construction, identified as shaker M2, with a capacity of 90 pounds/hour (not including dough), equipped with a fabric filter (RF3) for corn meal recovery and reuse, exhausting indoors.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the flour storage silos, weigh hoppers, mixer, dusting hopper, shakers, and bag breaker, shall each not exceed the following:

Emission Unit	Process Weight Rate (P) (tons/hr)	PM Emission Rate (E) (lb/hr)
Silo C1	3.57	9.618
Silo C2	3.57	9.618
Mixer B1	3.85	10.117
Mixer M1	1.70	5.850
Mixer M2	1.53	5.452

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their associated control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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Compliance Determination Requirements

D.3.3 Particulate Control

In order to comply with Condition D.3.1, the fabric filters used for particulate control shall be in operation and control emissions from the two (2) flour storage silos at all times when the two (2) flour storage silos are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.4 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust C-1 and C-2 shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

Record Keeping and Reporting [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.4, the Permittee shall maintain daily records of the visible emission notations of each stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a notation (e.g., the process did not operate that day).

(b) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

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SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

Insignificant Activities:

(d) Production related activities, including the following:

(1) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6.

(A) One (1) cold cleaning degreasing operation with a remote reservoir, constructed in 2002. [326 IAC 8-3]

(2) Cleaners and solvents characterized as:

(A) having a vapor pressure equal to or less than two (2.0) kilo Pascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pound per square inch) measured at thirty-eight (38) degrees Centigrade (one hundred (100) degrees Fahrenheit); or

(B) having a vapor pressure equal to or less than seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty (20) degrees Centigrade (sixty-eight (68) degrees Fahrenheit);

the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Volatile Organic Compounds (VOCs) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), the Permittee shall ensure the following control equipment and operating requirements are met:

(1) Equip the degreaser with a cover.

(2) Equip the degreaser with a device for draining cleaned parts.

(3) Close the degreaser cover whenever parts are not being handled in the degreaser.

(4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).

(6) Store waste solvent only in closed containers.

(7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

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SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

Insignificant Activities:

(e) Combustion related activities, including the following:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(i) One (1) natural gas-fired Hurst boiler, identified as Unit D, constructed in 1979, with a maximum heat input capacity of 2.60 MMBtu per hour, and exhausting at Stack D.

(ii) One (1) natural gas-fired Kewanee boiler, identified as Unit E, constructed in 1996, with a maximum heat input capacity of 1.80 MMBtu per hour, and exhausting at Stack E.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Particulate [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3(e) (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the 2.60 MMBtu per hour Hurst boiler (Unit D) shall not exceed 0.6 pounds of particulate matter per million British thermal unit heat input.

D.5.2 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate emission limitations for sources of indirect heating), emissions from the 1.80 MMBtu per hour Kewanee boiler (Unit E) shall not exceed 0.6 pounds of particulate matter per million British thermal units heat input.

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SECTION E.1 FACILITY OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

Insignificant Activities:

(f) Activities associated with emergencies, including the following:

(1) One (1) 5.36 HP natural gas-fired emergency generator, identified as Unit G, constructed in 1983, and exhausting to Stack G.

Under NESHAP ZZZZ, this unit is considered an affected emission unit.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.6580, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-82, for the emergency generator (Unit G) as specified in Table 8 of 40 CFR Part 63, Subpart ZZZZ in accordance with the schedule in 40 CFR 63, Subpart ZZZZ.

E.1.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-82] [40 CFR 63, Subpart ZZZZ]

The Permittee shall comply with the provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment A), except as otherwise specified in 40 CFR 63, Subpart ZZZZ:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625(e)(3), (f), (h), and (j)
(8) 40 CFR 63.6635
(9) 40 CFR 63.6640
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650
(12) 40 CFR 63.6655
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665
(15) 40 CFR 63.6670
(16) 40 CFR 63.6675
(17) Table 2d (item 5)
(18) Table 6 (item 9)
(19) Table 8

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: New Horizons Baking Company
Source Address: 700 West Water Street, Fremont, Indiana 46737
Part 70 Permit No.: T151-31292-00060

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify): _____

☐ Report (specify): _____

☐ Notification (specify): _____

☐ Affidavit (specify): _____

☐ Other (specify): _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

DRAFT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: New Horizons Baking Company
Source Address: 700 West Water Street, Fremont, Indiana 46737
Part 70 Permit No.: T151-31292-00060

This form consists of 2 pages Page 1 of 2

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), no later than four (**4**) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and
- The Permittee must submit notice in writing or by facsimile no later than two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency
Describe the cause of the Emergency

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If any of the following are not applicable, mark N/A

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? ☐ Y ☐ N Describe: Type of Pollutants Emitted: ☐ TSP ☐ PM-10 ☐ SO_2 ☐ VOC ☐ NO_X ☐ CO ☐ Pb ☐ other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance and Enforcement Branch

Part 70 Quarterly Report

Source Name: New Horizons Baking Company
Source Address: 700 West Water Street, Fremont, Indiana 46737
Part 70 Permit No.: T151-31292-00060
Facility: Muffin Line (Line B)
Parameter: Volatile Organic Compounds (VOCs)
Limit: 35.16 tons per year, according to the equation:

$$\text{VOC} = \sum_{m=1}^{12}\left(\left(\frac{(Ef+1)*D}{2000 lbs/ton}\right)+0.007\right)_m$$

Where:
D = The amount of baked product produced during month m (tons/month);
E_f = The VOC emission factor (lb of VOC/ton of baked product);
m = The compliance period is one (1) calendar month.

QUARTER: _____ **YEAR:** _____

Month	VOC Emissions (tons)	VOC Emissions (tons)	VOC Emissions (tons)
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance and Enforcement Branch

Part 70 Quarterly Report

Source Name: New Horizons Baking Company
Source Address: 700 West Water Street, Fremont, Indiana 46737
Part 70 Permit No.: T151-31292-00060
Facility: Muffin Line (Line H)
Parameter: Volatile Organic Compounds (VOCs)
Limit: 31.65 tons per year, according to the equation:

$$\text{VOC} = \sum_{m=1}^{12}\left(\left(\frac{(Ef+1)*D}{2000 lbs/ton}\right)+0.007\right)_m$$

Where:
D = The amount of baked product produced during month m (tons/month);
E_f = The VOC emission factor (lb of VOC/ton of baked product);
m = The compliance period is one (1) calendar month.

QUARTER: _____ **YEAR:** _____

Month	VOC Emissions (tons)	VOC Emissions (tons)	VOC Emissions (tons)
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

DRAFT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: New Horizons Baking Company
Source Address: 700 West Water Street, Fremont, Indiana 46737
Part 70 Permit No.: T151-31292-00060

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Date of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Date of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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Permit Requirement (specify permit condition #)	
Date of Deviation:	**Date of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Date of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Date of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Indiana Department of Environmental Management
Office of Air Quality

Attachment A
to Part 70 Operating Permit T151-31292-00060

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES (CONTINUED)

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

SOURCE: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in § 63.6675, which includes operating according to the provisions specified in § 63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of § 63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of § 63.6645(f) and the requirements of §§ 63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in § 63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with

the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§ 63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

§ 63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in § 63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in § 63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in § 63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in § 63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in § 63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in § 63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

§ 63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in § 63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either § 63.6603(b)(1) or § 63.6603(b)(2), or are on offshore vessels that meet § 63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of

HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (Eq. 1)$$

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209\ F_d}{F_c} \quad (Eq.\ 2)$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2 , as follows:

$$X_{CO2} = \frac{5.9}{F_o} \quad (Eq.\ 3)$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 —15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq.\ 4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

%CO_2 = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in § 63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in § 63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in § 63.8(d). As specified in § 63.8(f)(4), you may request approval of monitoring

system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in § 63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in § 63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also § 63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either § 63.6603(b)(1) or § 63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet § 63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements

in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in § 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period)

are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are

counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with § 63.6590(b), your notification should include the information in § 63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in § 63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to § 63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in § 63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in § 63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in § 63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in § 63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in § 63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in § 63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in § 63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in § 63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in § 63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in § 63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in § 63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in § 63.6640(f)(2)(ii) or (iii) or § 63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

§ 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in § 63.6600 under § 63.6(g).

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in § 63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see § 63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by § 63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2 .

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in § 63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in § 63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in § 63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in § 63.6640(f)(2)(ii) or (iii) and § 63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2 .

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in § 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in § 63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in § 63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X , CO, and volatile organic compounds (VOC) into CO_2 , nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in § 63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to § 63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to § 63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8 .

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's

recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE > 500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

TABLE 1B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR EXISTING, NEW, AND RECONSTRUCTED SI 4SRB STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.[1]
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and not using NSCR.	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§ 63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

TABLE 2B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR NEW AND RECONSTRUCTED 2SLB AND CI STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS, NEW AND RECONSTRUCTED 4SLB STATIONARY RICE ≥250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS, EXISTING CI STATIONARY RICE >500 HP

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

TABLE 2C TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING COMPRESSION IGNITION STATIONARY RICE LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS AND EXISTING SPARK IGNITION STATIONARY RICE ≤500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE [1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
4. Non-Emergency, non-black start CI stationary RICE 300>HP≤500." is corrected to read "4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500.	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent $O_{2.}$	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2.	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2.	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2.	

[1] If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[2] Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§ 63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

TABLE 2D TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING STATIONARY RICE LOCATED AT AREA SOURCES OF HAP EMISSIONS

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

[1] Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2] If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§ 63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

TABLE 3 TO SUBPART ZZZZ OF PART 63—SUBSEQUENT PERFORMANCE TESTS

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

[1] After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6711, Jan. 30, 2013]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§ 63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

TABLE 4 TO SUBPART ZZZZ OF PART 63. REQUIREMENTS FOR PERFORMANCE TESTS

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Measure the O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a c]	(a) Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005) [a b c] or Method 10 of 40 CFR part 60, appendix A	(a) The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a]	(a) measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03.[a]	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03,[a] provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A	(a) THC concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) if using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a]	(a) measurements to determine O_2concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03.[a]	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03,[a]provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005),[a c]Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[a] Incorporated by reference, see 40 CFR 63.14. You may also obtain copies from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b] You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

[c] ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE.

[78 FR 6711, Jan. 30, 2013]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in §§ 63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

TABLE 5 TO SUBPART ZZZZ OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITATIONS, OPERATING LIMITATIONS, AND OTHER REQUIREMENTS

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at both the inlet and outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using § 63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at the outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using § 63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2;

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

As stated in § 63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

TABLE 6 TO SUBPART ZZZZ OF PART 63—CONTINUOUS COMPLIANCE WITH EMISSION LIMITATIONS, AND OTHER REQUIREMENTS

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved [a]; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved [a]; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to § 63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to § 63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent.[a]
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit [a]; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit [a]; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2; and either ii. Collecting the catalyst inlet temperature data according to § 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent $O_{2,}$ or the average reduction of emissions of THC is 30 percent or more; and either ii. Collecting the catalyst inlet temperature data according to § 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

[a] After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6715, Jan. 30, 2013]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in § 63.6650, you must comply with the following requirements for reports:

TABLE 7 TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR REPORTS

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in § 63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in § 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), the information in § 63.6650(e); or	i. Semiannually according to the requirements in § 63.6650(b).
		c. If you had a malfunction during the reporting period, the information in § 63.6650(c)(4).	i. Semiannually according to the requirements in § 63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in § 63.6650.

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5).
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in § 63.6640(f)(4)(ii)	Report	a. The information in § 63.6650(h)(1)	i. annually according to the requirements in § 63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in § 63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.1	General applicability of the General Provisions	Yes.	
§ 63.2	Definitions	Yes	Additional terms defined in § 63.6675.
§ 63.3	Units and abbreviations	Yes.	
§ 63.4	Prohibited activities and circumvention	Yes.	
§ 63.5	Construction and reconstruction	Yes.	
§ 63.6(a)	Applicability	Yes.	
§ 63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§ 63.6(b)(5)	Notification	Yes.	
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§ 63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§ 63.6(c)(3)-(4)	[Reserved]		
§ 63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§ 63.6(d)	[Reserved]		
§ 63.6(e)	Operation and maintenance	No.	
§ 63.6(f)(1)	Applicability of standards	No.	
§ 63.6(f)(2)	Methods for determining compliance	Yes.	
§ 63.6(f)(3)	Finding of compliance	Yes.	
§ 63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§ 63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§ 63.6(i)	Compliance extension procedures and criteria	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.6(j)	Presidential compliance exemption	Yes.	
§ 63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§ 63.6610, 63.6611, and 63.6612.
§ 63.7(a)(3)	CAA section 114 authority	Yes.	
§ 63.7(b)(1)	Notification of performance test	Yes	Except that § 63.7(b)(1) only applies as specified in § 63.6645.
§ 63.7(b)(2)	Notification of rescheduling	Yes	Except that § 63.7(b)(2) only applies as specified in § 63.6645.
§ 63.7(c)	Quality assurance/test plan	Yes	Except that § 63.7(c) only applies as specified in § 63.6645.
§ 63.7(d)	Testing facilities	Yes.	
§ 63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at § 63.6620.
§ 63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at § 63.6620.
§ 63.7(e)(3)	Test run duration	Yes.	
§ 63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§ 63.7(f)	Alternative test method provisions	Yes.	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§ 63.7(h)	Waiver of tests	Yes.	
§ 63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at § 63.6625.
§ 63.8(a)(2)	Performance specifications	Yes.	
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring for control devices	No.	
§ 63.8(b)(1)	Monitoring	Yes.	
§ 63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§ 63.8(c)(1)(i)	Routine and predictable SSM	No	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§ 63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§ 63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§ 63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§ 63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§ 63.8(d)	CMS quality control	Yes.	
§ 63.8(e)	CMS performance evaluation	Yes	Except for § 63.8(e)(5)(ii), which applies to COMS.
		Except that § 63.8(e) only applies as specified in § 63.6645.	
§ 63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that § 63.8(f)(4) only applies as specified in § 63.6645.
§ 63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that § 63.8(f)(6) only applies as specified in § 63.6645.
§ 63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§ 63.6635 and 63.6640.
§ 63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§ 63.9(b)(1)-(5)	Initial notifications	Yes	Except that § 63.9(b)(3) is reserved.

General provisions citation	Subject of citation	Applies to subpart	Explanation
		Except that § 63.9(b) only applies as specified in § 63.6645.	
§ 63.9(c)	Request for compliance extension	Yes	Except that § 63.9(c) only applies as specified in § 63.6645.
§ 63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that § 63.9(d) only applies as specified in § 63.6645.
§ 63.9(e)	Notification of performance test	Yes	Except that § 63.9(e) only applies as specified in § 63.6645.
§ 63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(1)	Notification of performance evaluation	Yes	Except that § 63.9(g) only applies as specified in § 63.6645.
§ 63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that § 63.9(g) only applies as specified in § 63.6645.	
§ 63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. § 63.9(h)(4) is reserved.
			Except that § 63.9(h) only applies as specified in § 63.6645.
§ 63.9(i)	Adjustment of submittal deadlines	Yes.	
§ 63.9(j)	Change in previous information	Yes.	
§ 63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§ 63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§ 63.10(b)(2)(i)-(v)	Records related to SSM	No.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.10(b)(2)(vi)-(xi)	Records	Yes.	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes.	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§ 63.10(b)(3)	Records of applicability determination	Yes.	
§ 63.10(c)	Additional records for sources using CEMS	Yes	Except that § 63.10(c)(2)-(4) and (9) are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes.	
§ 63.10(d)(2)	Report of performance test results	Yes.	
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.10(d)(4)	Progress reports	Yes.	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§ 63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§ 63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§ 63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that § 63.10(e)(3)(i) (C) is reserved.
§ 63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§ 63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§ 63.11	Flares	No.	
§ 63.12	State authority and delegations	Yes.	
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by reference	Yes.	
§ 63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 SCOPE AND APPLICATION. WHAT IS THIS PROTOCOL?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O_2) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O_2).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O_2)	*7782-44-7*	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O_2 , or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 SUMMARY OF PROTOCOL

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O_2 gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design

specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 DEFINITIONS

3.1 Measurement System. The total equipment required for the measurement of CO and O_2 concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a

length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O_2 and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 INTERFERENCES.

When present in sufficient concentrations, NO and NO_2 are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 SAFETY. [RESERVED]

6.0 EQUIPMENT AND SUPPLIES.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O_2 concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O_2 ; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 REAGENTS AND STANDARDS. WHAT CALIBRATION GASES ARE NEEDED?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O_2. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ± 5 percent of the label value. Dry ambient air (20.9 percent O_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O_2 Calibration Gas Concentration.

Select an O_2 gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O_2 . When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO_2).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ± 10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ± 3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O_2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ± 3 percent of the up-scale gas value or ± 1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ± 0.3 percent O_2 for the O_2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two minutes. Then begin the "measurement data phase" and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the "measurement data phase" readings from the reported standard gas value must be less than or equal to ± 5 percent or ± 1 ppm for CO or ± 0.5 percent O_2 , whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single "measurement data phase" reading must be less than or equal to ± 2 percent or ± 1 ppm for CO or ± 0.5 percent O_2 , whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O_2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the "measurement data phase".

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the "measurement data phase". The maximum allowable deviation from the mean for each of the individual readings is ± 2 percent, or ± 1 ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ± 2 percent *or ± 1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed*).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO_2 interference response should be less than or equal to ± 5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average "measurement data phase" CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ± 3 percent or ± 1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 POLLUTION PREVENTION (RESERVED)

15.0 WASTE MANAGEMENT (RESERVED)

16.0 ALTERNATIVE PROCEDURES (RESERVED)

17.0 REFERENCES

(1) "Development of an Electrochemical Cell Emission Analyzer Test Protocol", Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) "Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers", EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) "ICAC Test Protocol for Periodic Monitoring", EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) "Code of Federal Regulations", Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

Facility_____ Engine I.D._____ Date_____				
Run Type:	(_)	(_)	(_)	(_)
(X)	Pre-Sample Calibration	Stack Gas Sample	Post-Sample Cal. Check	Repeatability Check

.

Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Gas	O_2	CO	O_2	CO	O_2	CO	O_2	CO			
Sample Cond. Phase											
"											
"											
"											
"											
Measurement Data Phase											
"											
"											
"											
"											
"											
"											
"											
"											
"											
"											
Mean											
Refresh Phase											
"											
"											
"											
"											

[78 FR 6721, Jan. 30, 2013]

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a
Significant Source Modification and Part 70 Operating Permit

Source Background and Description

Source Name:	New Horizons Baking Company
Source Location:	700 W. Water Street, Fremont, IN 46737
County:	Steuben
SIC Code:	2051 (Bread and Other Bakery Products, Except Cookies and Crackers)
Significant Source Modification No.:	151-32848-00060
Part 70 Operating Permit No.:	T151-31292-00060
Permit Reviewer:	Jason R. Krawczyk

The Office of Air Quality (OAQ) has reviewed applications from New Horizons Baking Company relating to the transition of a Minor Source Operating Permit (MSOP) to a Part 70 Operating Permit.

On December 21, 2011, the New Horizons Baking Company submitted an application to the OAQ requesting to transition from its existing MSOP to a Part 70 Operating Permit. The New Horizons Baking Company was issued their first MSOP Renewal (M151-26750-00060) on November 17, 2008.

On September 28, 2012, New Horizons Baking Company submitted an application to update emission units for the Bun Line (Line A) and Muffin Line (Line B), to incorporate VOC emissions from proofing, and to update the VOC emission factor for Line B based on stack testing performed November 2010.

On February 19, 2013, New Horizons Baking Company submitted an application to construct and operate a new muffin line (Line H).

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) bun line, identified as Line A, constructed in 1979, with a maximum throughput capacity of 7,700 pounds of bread per hour, and consisting of:

(1) One (1) natural gas-fired oven, identified as Unit A, with a maximum heat input of 4.60 MMBtu per hour, exhausting to Stack A; and

(2) One (1) proof box, identified as Line A Proof Box.

Note: Although previously included in the permit, the source did not provide the potential to emit of the proof box when it was added in MSOP Minor Permit Revision 151-28993-00060, issued May 10, 2010. Based on the PTE, the source did not obtain the proper construction or operation approval for the Line A Proof Box.

(b) One (1) muffin line, identified as Line B, constructed in 1983 and modified in 2008, with a maximum throughput capacity of 3,400 pounds of bread per hour, and consisting of:

(1) One (1) natural gas-fired muffin griddle, identified as Unit B, with a maximum heat input of 3.70 MMBtu per hour, exhausting to Stack B; and

(2) One (1) proof box, identified as Line B Proof Box.

Note: Although previously included in the permit, the source did not provide the potential to emit of the proof box when it was added in MSOP Minor Permit Revision 151-28993-00060, issued May 10, 2010. Based on the PTE, the source did not obtain the proper construction or operation approval for the Line B Proof Box.

(c) Two (2) flour storage silos, identified as Unit C1 and C2, each with a maximum storage capacity of 60 tons of flour and a throughput rate of 6,250 pounds of flour per hour plus twenty percent (20%) flour recovery, equipped with a pneumatic conveyance system, using fabric filters as control, constructed in 1979, and exhausting to Stacks C1 and C2, respectively.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

The source also consists of the following emission units that were constructed and are operating without a proper permit:

(a) One (1) dough mixer, installed in 2010, identified as mixer B1, with a capacity of 7,700 pounds/hour, exhausting indoors.

(b) One (1) proof box, identified as Line A Proof Box.

(c) One (1) proof box, identified as Line B Proof Box.

Emission Units and Pollution Control Equipment Removed From the Source

The source has not removed any emission units.

Insignificant Activities

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Combustion related activities, including the following:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(i) One (1) natural gas-fired Hurst boiler, identified as Unit D, constructed in 1979, with a maximum heat input capacity of 2.60 MMBtu per hour, and exhausting at Stack D.

(ii) One (1) natural gas-fired Kewanee boiler, identified as Unit E, constructed in 1996, with a maximum heat input capacity of 1.80 MMBtu per hour, and exhausting at Stack E.

(iii) Six (6) natural gas-fired space heaters, identified as F1 through F6, each with a maximum heat input of 0.10 MMBtu per hour, and installed in 1979.

(iv) Two (2) natural gas-fired space heaters, identified as F7 through F8, each with a maximum heat input of 0.10 MMBtu per hour, both installed in 1979.

(v) Four (4) natural gas-fired space heaters, identified as F9 through F12, each with a maximum heat input of 0.10 MMBtu per hour, each installed in 2004.

(b) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons:

(A) One (1) 50-gallon hydraulic oil tank, identified as HD-1 Oven, constructed in 1979;

(B) One (1) 35-gallon hydraulic oil tank, identified as HD-2 Developer, constructed in1978;

(C) One (1) 15-gallon oil tank, identified as GL-1 Griddle, constructed in 2009;

(D) One (1) 1-gallon lube oil tank, identified as PRO-1 Proofer, constructed in 1996;

(E) One (1) 1-gallon HT2000 storage tank, identified as Oven-1, constructed in 1989;

(F) One (1) 10-gallon solvent storage tank, identified as Maintenance Solvent 1, constructed in 1984;

(G) One (1) 1-gallon Volcool VNT700 storage tank, identified as Water Soluble, constructed in 1985; and

(H) One (1) 55-gallon lube oil tank, identified as K-Lub, constructed in 1984.

(c) Production related activities, including the following:

(1) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6.

(A) One (1) cold cleaning degreasing operation with a remote reservoir, constructed in 2002. [326 IAC 8-3]

(2) Cleaners and solvents characterized as:

(A) having a vapor pressure equal to or less than two (2.0) kilo Pascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pound per square inch) measured at thirty-eight (38) degrees Centigrade (one hundred (100) degrees Fahrenheit); or

(B) having a vapor pressure equal to or less than seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty (20) degrees Centigrade (sixty-eight (68) degrees Fahrenheit);

the use of which, for all cleaners and solvents combined, does not exceed on e hundred forty-five (145) gallons per twelve (12) months.

(d) One (1) bun production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, bun mixer (weigh scale) hopper, bun mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, permitted in 1979, with a maximum throughput of 4,577 pounds of flour per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, installed in 1979, identified as hopper B1, with a capacity of 4,577 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(2) One (1) dough mixer, installed in 2010, identified as mixer B1, with a capacity of 7,700 pounds/hour, exhausting indoors.

(3) One (1) dusting hopper, installed in 1996, identified as hopper B2, with a capacity of 100 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(4) One (1) shaker, installed in 1996, identified as shaker B1, with a capacity of 100 pounds/hour (not including dough), equipped with a fabric filter (RF1) for flour recovery and reuse, exhausting indoors.

(e) One (1) muffin production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, muffin mixer (weigh scale) hopper, muffin mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, permitted in 1983, with a maximum throughput of 770 pounds of flour per hour and 100 pounds of cornmeal per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, installed in 1983, identified as hopper M1, with a capacity of 770 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(2) One (1) bag breaker, installed in 1983, identified as breaker M1, with a capacity of 100 pounds/hour, exhausting indoors.

(3) One (1) mixer, installed in 1997, identified as mixer M1, with a capacity of 3,400 pounds/hour, exhausting to the weigh hopper.

(4) One (1) shaker, installed in 2011, identified as shaker M1, with a capacity of 100 pounds/hour (not including dough), equipped with a fabric filter (RF2) for corn meal recovery and reuse, exhausting indoors.

(f) Paved and roads and parking lots with public access.

(g) Activities associated with emergencies, including the following:

(1) One (1) 5.36 HP natural gas-fired emergency generator, identified as Unit G, constructed in 1983, and exhausting to Stack G.

Under NESHAP ZZZZ, this unit is considered an affected emission unit.

This stationary source also includes the following insignificant activities which are not specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Production related activities, including the following:

(1) Application of:

(A) oils;

(B) greases; and

(C) lubricants

as temporary protective coatings.

(2) Machining where an aqueous cutting coolant continuously floods the machining interface.

(3) Maintenance welding.

(4) Closed loop heating and cooling systems.

(b) Solvent recycling systems with batch capacity less than or equal to one hundred (100) gallons.

(c) Water based activities, including the following:

(1) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.

(2) Noncontact cooling tower systems with either of the following:

(A) Forced and induced draft cooling tower systems not regulated under a NESHAP.

Oil, grease, or VOC content shall be determined by a test method acceptable to the department and the U.S. EPA.

(d) Repair activities, including the following:

(1) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.

(e) Blowdown for the following:

(1) Boiler.

(2) Cooling tower.

(3) Compressors.

Existing Approvals

Since the issuance of the Minor Source Operating Permit Renewal No. M151-26750-00060 on November 17, 2008, the source has constructed or has been operating under the following additional approvals:

Minor Permit Revision No. 151-28993-00060 issued on May 10, 2010.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit". IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

IDEM, OAQ has recently been incorporating VOC emissions from proof boxes into a facility's potential to emit summary and considering a proof box and oven to be one facility with VOC emissions from proofing assumed to be 10% of the emissions calculated for fermentation.

Summary of Proposed Modification

The Office of Air Quality (OAQ) has reviewed applications, submitted by New Horizons Baking Company on September 28, 2012 and February 19, 2013, relating to:

1) The removal of a VOC Minor Limit, addition of emissions from the proof boxes and ingredient handling associated with the Bun Line (Line A) and Muffin Line (Line B);

2) The incorporation of Best Available Control Technology for the Muffin Line (Line B); and

3) The addition of new Muffin Line (Line H).

The following is a list of the modified emission units:

(a) One (1) bun line, identified as Line A, constructed in 1979, with a maximum throughput capacity of 7,700 pounds of bread per hour, and consisting of:

  (1) One (1) natural gas-fired oven, identified as Unit A, with a maximum heat input of 4.60 MMBtu per hour, exhausting to Stack A; and

  (2) One (1) proof box, identified as Line A Proof Box.

(b) One (1) muffin line, identified as Line B, constructed in 1983 and modified in 2008, with a maximum throughput capacity of 3,400 pounds of bread per hour, and consisting of:

  (1) One (1) natural gas-fired muffin griddle, identified as Unit B, with a maximum heat input of 3.70 MMBtu per hour, exhausting to Stack B; and

  (2) One (1) proof box, identified as Line B Proof Box.

The following is a list of the new emission units:

(a) One (1) muffin line, identified as Line H, approved in 2013 for construction, with a maximum throughput capacity of 3,060 pounds of bread per hour, and consisting of:

  (1) One (1) natural gas-fired muffin griddle, identified as Unit H, with a maximum heat input of 3.70 MMBtu per hour, exhausting to Stack C; and

  (2) One (1) proof box, identified as Line H Proof Box.

(b) One (1) muffin production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, muffin mixer (weigh scale) hopper, muffin mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, approved in 2013 for construction, with a maximum throughput of 693 pounds of flour per hour and 90 pounds of cornmeal per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, approved in 2013 for construction, identified as hopper M2, with a capacity of 693 pounds/hour, equipped with a fabric bag filter (RF3) for flour recovery and reuse, exhausting indoors.

(2) One (1) bag breaker, approved in 2013 for construction, identified as breaker M2, with a capacity of 90 pounds/hour, exhausting indoors.

(3) One (1) mixer, approved in 2013 for construction, identified as mixer M2, with a capacity of 3,060 pounds/hour, exhausting to the weigh hopper.

(4) One (1) shaker, approved in 2013 for construction, identified as shaker M2, with a capacity of 90 pounds/hour (not including dough), equipped with a fabric filter (RF3) for corn meal recovery and reuse, exhausting indoors.

The following emission units were not previously specifically identified in the permit; however, they were generically identified as part of the pneumatic conveyance systems associated with the flour storage silos for the bun and muffin lines:

(a) One (1) bun production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, bun mixer (weigh scale) hopper, bun mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, permitted in 1979, with a maximum throughput of 4,577 pounds of flour per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, installed in 1979, identified as hopper B1, with a capacity of 4,577 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(2) One (1) dough mixer, installed in 2010, identified as mixer B1, with a capacity of 7,700 pounds/hour, exhausting indoors.

(3) One (1) dusting hopper, installed in 1996, identified as hopper B2, with a capacity of 100 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(4) One (1) shaker, installed in 1996, identified as shaker B1, with a capacity of 100 pounds/hour (not including dough), equipped with a fabric filter (RF1) for flour recovery and reuse, exhausting indoors.

(b) One (1) muffin production line, including, but not limited to, pneumatic dry ingredient conveyance process equipment and piping, liquid ingredient conveyance process equipment and piping, dough conveyance system, use bins, muffin mixer (weigh scale) hopper, muffin mixer, transfer equipment, other process equipment and piping, and associated dry ingredient recovery baghouse, permitted in 1983, with a maximum throughput of 770 pounds of flour per hour and 100 pounds of cornmeal per hour. The conveyance system includes the following emission units:

(1) One (1) weigh hopper, installed in 1983, identified as hopper M1, with a capacity of 770 pounds/hour, equipped with a fabric bag filter (RF1) for flour recovery and reuse, exhausting indoors.

(2) One (1) bag breaker, installed in 1983, identified as breaker M1, with a capacity of 100 pounds/hour, exhausting indoors.

(3) One (1) mixer, installed in 1997, identified as mixer M1, with a capacity of 3,400 pounds/hour, exhausting to the weigh hopper.

(4) One (1) shaker, installed in 2011, identified as shaker M1, with a capacity of 100 pounds/hour (not including dough), equipped with a fabric filter (RF2) for corn meal recovery and reuse, exhausting indoors.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Steuben County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Steuben County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Steuben County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011.. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Steuben County has been classified as attainment or unclassifiable in Indiana for SO_2, CO, PM_{10}, NO_2, and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	**Tons/year**
PM	121.10
PM_{10}	41.59
$PM_{2.5}$	41.59
SO_2	0.05
VOC	146.19
CO	6.35
NO_x	7.56
GHGs as CO_2e	9,125
HAP Acetaldehyde	4.37
Total HAP	4.51

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Operating Permit.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year.

Actual Emissions

No previous emission data has been received from the source.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Increase in PTE Before Controls of the Modification	
Pollutant	**Potential To Emit** (ton/yr)
PM	39.16
PM_{10}	12.47
$PM_{2.5}$	12.47
SO_2	0.01
NO_X	1.59
VOC	55.96
CO	1.33
GHGs as CO2e	6,221
Single HAP (Acetaldehyde)	1.68
Total HAPs	1.71

Appendix A of this TSD reflects the unrestricted potential emissions of the modification.

These changes require a source modification under 326 IAC 2-7-10.5 because the potential to emit before consideration of controls is greater than the levels outlined in 326 IAC 2-1.1-3(e)(1).

In addition, this source modification is subject to 326 IAC 2-7-10.5(g) because the modification is subject to 326 IAC 8-1-6.

Permit Level Determination - PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units and potential emissions that were added to the permit or modified as part of this modification. Any new control equipment is considered federally enforceable only after issuance of this Part 70 Operating Permit, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process / Emission Unit	Potential To Emit of Modification (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Single HAP (Acet.)
Bun Line (Line A)										
Proof Box	-	-	-	-	-	16.86	-	-	0.51	0.51
Combustion	-	-	-	-	-	-	-	2,385	-	-
Muffin Line (Line B)										
Proof Box	-	-	-	-	-	7.45	-	-	0.22	0.22
Combustion	-	-	-	-	-	-	-	1,918	-	-
Muffin Line (Line H)										
Griddle	-	-	-	-	-	24.86	-	-	0.75	0.75
Proof Box	-	-	-	-	-	6.70	-	-	0.20	0.20
Combustion	0.03	0.12	0.12	0.01	1.59	0.09	1.33	1,918	0.03	-
Silo Loading [1]	21.32	7.47	7.47	-	-	-	-	-	-	-
Bun Line (Line A) Ingredient Handling	9.70	2.66	2.66	-	-	-	-	-	-	-
Muffin Line (Line B) Ingredient Handling	4.27	1.17	1.17	-	-	-	-	-	-	-
Muffin Line (Line H) Ingredient Handling	3.84	1.05	1.05	-	-	-	-	-	-	-
Total PTE of Modification	**39.16**	**12.47**	**12.47**	**0.01**	**1.59**	**55.96**	**1.33**	**6,221**	**1.71**	**1.68**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	NA	NA

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.

1. The emissions increase at the Silo Loading is due to the inclusion of the flour recovery process that was previously not calculated.

Acet. = Acetaldehyde

This modification to an existing minor stationary source is not major because the emissions increase is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Potential to Emit of the Entire Source After Issuance

Entire Source

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 Operating Permit, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process / Emission Unit	Potential To Emit of the Entire Source After Issuance of the Part 70 Operating Permit (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Single HAP (Acet.)
Bun Line (Line A)										
Oven	-	-	-	-	-	62.15	-	-	1.86	1.86
Proof Box	-	-	-	-	-	16.86	-	-	0.51	0.51
Combustion	0.04	0.15	0.15	0.01	1.98	0.11	1.66	2,385	0.04	-
Muffin Line (Line B)										
Griddle	-	-	-	-	-	35.16	-	-	0.83	0.83
Proof Box	-	-	-	-	-		-	-	0.22	0.22
Combustion	0.03	0.12	0.12	0.01	1.59		1.33	1,918	0.03	-
Muffin Line (Line H)										
Griddle	-	-	-	-	-	31.65	-	-	0.75	0.75
Proof Box	-	-	-	-	-		-	-	0.20	0.20
Combustion	0.03	0.12	0.12	0.01	1.59		1.33	1,918	0.03	-
Bun Line (Line A) Ingredient Handling	9.70	2.66	2.66	-	-	-	-	-	-	-
Muffin Line (Line B) Ingredient Handling	4.27	1.17	1.17	-	-	-	-	-	-	-
Muffin Line (Line H) Ingredient Handling	3.84	1.05	1.05	-	-	-	-	-	-	-
Silo Loading	103.15	36.14	36.17							
Boilers (D &E)	3.6E-02	0.14	0.14	1.1E-02	1.89	0.10	1.59	2,281	3.6E-02	-
Heaters (F1 - F12)	9.8E-03	3.9E-02	3.9E-02	3.1E-03	5.2E-01	2.8E-02	0.43	622.12	9.7E-03	-
Emergency Generator (Unit G)	3.4E-05	2.6E-07	2.6E-07	2.0E-06	2.9E-03	5.0E-03	1.9E-03	0.47	2.4E-04	2.9E-05
VOC Storage Tanks	-	-	-	-	-	0.02	-	-	-	-
Insignificant Activities	-	-	-	-	-	0.11	-	-	-	-
Paved Roads (Fugitive)	0.19	3.8E-02	9.4E-03	-	-	-	-	-	-	-
Total PTE of Entire Source	121.10	41.59	41.59	0.05	7.56	146.19	6.35	9,125	4.51	4.37
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	NA	NA

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.

Acet. = Acetaldehyde

This existing stationary source is not major for PSD because the emissions of each regulated pollutant, excluding GHGs, are less than two hundred fifty (<250) tons per year, emissions of GHGs are less than one hundred thousand (<100,000) tons of CO_2 equivalent emissions (CO_2e) per year, and it is not in one of the twenty-eight (28) listed source categories.

Federal Rule Applicability

New Source Performance Standards (NSPS)

(a) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in the permit, since the natural gas-fired Hurst and Kewannee Boilers (Unit D and Unit E) have maximum heat capacities less than 10 MMBtu per hour, each.

(b) The requirements of the New Source Performance Standard for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978, 40 CFR 60, Subpart K (326 IAC 12), are not included in the permit for storage tank HD-2 Developer, because it has a storage capacity less than 151,412 liters (40,000 gallons).

(c) The requirements of the New Source Performance Standard for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984, 40 CFR 60, Subpart Ka (326 IAC 12), are not included in the permit for the HD-1 Oven, Maintenance Solvent 1, and K-Lub tanks, because they have capacities less than 151,416 liters (40,000 gallons).

(d) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60, Subpart Kb (326 IAC 12), are not included in the permit since none of the VOL storage vessels that were constructed after July 23, 1984, has a capacity greater than 75 cubic meters (m^3) (19,813 gallons).

(e) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII (326 IAC 12), are not included in the permit for the natural gas-fired emergency generator, because the emission unit is a spark ignition engine and is therefore not covered by this NSPS.

(f) The requirements of the New Source Performance Standard for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ (326 IAC 12), are not included in the permit for the natural gas-fired emergency generator because the construction of the engine commenced prior to June 12, 2006.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(g) The requirements of the National Emission Standard for Hazardous Air Pollutants for Halogenated Solvent Cleaning, 40 CFR 63, Subpart T (326 IAC 20-6) are not included in the permit for the one (1) cold cleaning degreasing operation, since it does not use any solvent containing methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent.

(h) The 5.36 HP natural gas-fired emergency generator, identified as Unit G is subject the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ (326 IAC 20-82), because it is considered a existing stationary reciprocating internal combustion engine (RICE) (construction commenced before June 12, 2006) at an area source of hazardous air pollutants (HAP).

The facilities subject to this rule include the following:

(1) One (1) 5.36 HP natural gas-fired emergency generator, identified as Unit G, constructed in 1983, and exhausting to Stack G.

Under NESHAP ZZZZ, this unit is considered an affected emission unit.

Applicable portions of the NESHAP are the following:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625(e)(3), (f), (h), and (j)
(8) 40 CFR 63.6635
(9) 40 CFR 63.6640
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650
(12) 40 CFR 63.6655
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665
(15) 40 CFR 63.6670
(16) 40 CFR 63.6675
(17) Table 2d (item 5)
(18) Table 6 (item 9)
(19) Table 8

Note: Existing emergency spark ignition (SI) stationary RICE located at an area source of HAP are not subject to numerical CO or formaldehyde emission limitations, but are only subject to work and management practices under Table 2d and Table 6.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the source except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

(i) The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63.7480, Subpart DDDDD (326 IAC 20-95) are not included in the permit for the Hurst and Kewannee Boilers (Unit D and Unit E), because the source is not a major source of HAPs as defined in 40 CFR 63.2 or 40 CFR 63.761.

(j) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63.11193, Subpart JJJJJJ, are not included in the permit because Unit D and Unit E are gas-fired boilers, as defined by 40 CFR 63.11237, and are specifically exempted under 40 CFR 63.11195(e).

Compliance Assurance Monitoring (CAM)

(k) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

None of the emission units at this source have a potential to emit greater than the major source threshold for the pollutants emitted. Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the existing units as part of this Part 70 Operating Permit.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.

326 IAC 1-5-2 (Emergency Reduction Plans)
The source is subject to 326 IAC 1-5-2.

326 IAC 2-6 (Emission Reporting)
This source, not located in Lake, Porter, or LaPorte County, is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM_{10} is less than 250 tons per year; and the potential to emit of CO, NO_X, and SO_2 is less than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 by July 1, 2013, and every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because this source does not have potential fugitive particulate emissions greater than 25 tons per year.

326 IAC 6.5 (PM Limitations Except Lake County)
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 (PM Limitations for Lake County)
This source is not subject to 326 IAC 6.8 because it is not located in Lake County.

326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

State Rule Applicability – Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of this source will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
(a) Pursuant to 326 IAC 6-2-3(e), particulate emissions from the 2.60 MMBtu per hour Hurst boiler (Unit D) shall not exceed 0.6 pounds of particulate matter per MMBtu heat input.

(b) Pursuant to 326 IAC 6-2-4, particulate emissions from the 1.80 MMBtu per hour Kewanee boiler (Unit E) shall in no case exceed 0.6 pounds of particulate matter per MMBtu heat input.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions shall each not exceed the following:

Emission Unit	Process Weight Rate (P) (tons/hr)	PM Emission Rate (E) (lb/hr)
Silo C1	3.57	9.618
Silo C2	3.57	9.618
Mixer B1	3.85	10.117
Mixer M1	1.70	5.850
Mixer M2	1.53	5.452

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dry filters used for particulate control shall be in operation and control emissions from the two (2) flour storage silos at all times when the two (2) flour storage silos are in operation, in order to comply with this limit.

(b) Pursuant to 326 IAC 6-3-1(b)(14), the following emission units are not subject to the requirements of 326 IAC 6-3-2 since each has potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour, each.

Emission Unit
Hopper B1
Hopper B2
Shaker B1
Hopper M1
Breaker M1
Shaker M1
Hopper M2
Breaker M2
Shaker M2

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
None of the emission units are subject to 326 IAC 326 IAC 7-1.1, because the SO_2 PTE (or limited SO_2 PTE) from each unit is less than 25 tons/year or 10 pounds/hour.

326 IAC 8-1-6 (New facilities; general reduction requirements)

(a) The bun line, identified as Line A, is not subject to 326 IAC 8-1-6 because it was constructed prior to January 1, 1980.

(b) The muffin line, identified as Line B, is subject to 326 IAC 8-1-6 because it exceeded the 326 IAC 8-1-6 avoidance limit of 24.71 pounds per hour, which was made federally enforceable pursuant to Minor Permit Revision No. 151-26448-00060, issued June 26, 2008 (Revised by Minor Permit Revision No. 151-28993-00060, issued May 10, 2010). Therefore, IDEM, OAQ has performed a BACT analysis, which was based on the Draft "Top Down Approach: BACT Guidance" by USEPA, Office of Air Quality Planning Standards, March 15, 1990 (see Appendix B).

IDEM, OAQ has determined that the best available control technology (BACT) to control VOC emissions from the muffin line (Line B) shall be as follows:

(1) VOC emissions from the muffin line, identified as Line B (consisting of the muffin griddle (Unit B) and the proof box (Line B Proof Box)), shall not exceed 35.16 tons per twelve (12) consecutive month period.

(2) The source shall operate Line B (consisting of the muffin griddle (Unit B) and proof box (Line B Proof Box)) in accordance the manufacturer's design and operating specifications.

(3) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box (Line B Proof Box) and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

Weekly Cleaning Procedure:

(1) Clean inner housing top and bottom using a hand brush and knife scraper;
(2) Clean inner conveyor shafts and bearing housings. Use a clean cloth for removal of residual debris and any bearing over lubrication;
(3) Clean inner door ledge framework using a hand brush and clean cloth;
(4) Wash inner housing;
(5) Wash inner conveyor shafts and bearing housings;
(6) Wash inner door ledge framework;
(7) Clean debris from lower proofer doors using a hand brush and clean cloth. If there are problem areas on the doors, a knife scraper can be used to remove encrusted debris.
(8) Wash lower proofer doors.

See Appendix B of this Technical Support Document for the detailed BACT Analysis.

Note: The existing avoidance limit has been replaced with this new requirement pursuant 326 IAC 8-1-6.

(c) The muffin line, identified as Line H, is subject to 326 IAC 8-1-6 because the potential to emit VOC is greater than twenty-five (25) tons per year, and it will be constructed after January 1, 1980. Therefore, IDEM, OAQ has performed a BACT analysis, which was based on the Draft "Top Down Approach: BACT Guidance" by USEPA, Office of Air Quality Planning Standards, March 15, 1990 (see Appendix B).

IDEM, OAQ has determined that the best available control technology (BACT) to control VOC emissions from the muffin line (Line H) shall be as follows:

(1) VOC emissions from the muffin line, identified as Line H (consisting of the muffin griddle (Unit H) and the proof box (Line H Proof Box)), shall not exceed 31.65 tons per twelve (12) consecutive month period.

(2) The source shall operate Line H (consisting of the muffin griddle (Unit H) and proof box (Line H Proof Box)) in accordance the manufacturer's design and operating specifications.

(3) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box (Line H Proof Box) and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

Weekly Cleaning Procedure:

(1) Clean inner housing top and bottom using a hand brush and knife scraper;
(2) Clean inner conveyor shafts and bearing housings. Use a clean cloth for removal of residual debris and any bearing over lubrication;
(3) Clean inner door ledge framework using a hand brush and clean cloth;
(4) Wash inner housing;
(5) Wash inner conveyor shafts and bearing housings;
(6) Wash inner door ledge framework;
(7) Clean debris from lower proofer doors using a hand brush and clean cloth. If there are problem areas on the doors, a knife scraper can be used to remove encrusted debris.
(8) Wash lower proofer doors.

See Appendix B of this Technical Support Document for the detailed BACT Analysis.

(d) The potential to emit VOC from all other existing emission units are less than 25 tons per year, each. Therefore, 326 IAC 8-1-6 (BACT) does not apply.

326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements)
Pursuant to 326 IAC 8-3-1(c)(1)(B), the degreasing operation (constructed in 2002) is subject to the requirements of 326 IAC 8-3-2(a), since it was constructed after January 1, 1980, and is not located in any of the following counties: Clark, Elkhart, Floyd, Lake, Marion, Porter, or St. Joseph.

The degreasing operation is equipped with a remote solvent reservoir. Pursuant to 326 IAC 8-3-1(c)(2)(A), the requirements of 326 IAC 8-3-2(b) are not applicable to the degreasing operation.

Since the degreasing operation is not required to comply with and is not operated in compliance with 326 IAC 20-6-1, and the degreasing operation uses a solvent containing greater than one percent (1%) of VOC by weight, it does not meet the exemption criteria contained in 326 IAC 8-3-1(d)(1). Therefore, the degreasing operation is subject to the applicable requirements of 326 IAC 8-3-2, as identified below:

Pursuant to 326 IAC 8-3-2 (Cold cleaner operation), the Permittee shall ensure the following control equipment and operating requirements are met:

(1) Equip the degreaser with a cover.

(2) Equip the degreaser with a device for draining cleaned parts.

(3) Close the degreaser cover whenever parts are not being handled in the degreaser.

(4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).

(6) Store waste solvent only in closed containers.

(7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers)
The source is not located in Clark, Floyd, Lake, or Porter County. Pursuant to 326 IAC 8-3-8(a)(2), the requirements of 326 IAC 8-3-8 are not applicable to the degreasing operations until January 1, 2015.

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
The requirements of 326 IAC 8-4-3 apply to all petroleum liquid storage vessels with capacities greater than one hundred fifty thousand (150,000) liters (thirty-nine thousand (39,000 gallons)) containing volatile organic compounds whose true vapor pressure is greater than 10.5 kPA (1.52 psi). The Permittee does not operate petroleum liquid storage vessels containing VOCs with capacities of thirty-nine thousand (39,000) gallons or greater. Therefore the requirements of 326 IAC 8-4-3 are not applicable and are not included in the permit.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
The source is not located in Clark, Floyd, Lake, or Porter Counties. The source is located in Steuben County. Therefore, the requirements of 326 IAC 8-9 are not applicable to the miscellaneous storage tanks and are not included in the permit.

326 IAC 20-6 (Halogenated Solvent Cleaning)
The degreasing operations do not use halogenated HAP solvents. Therefore, the requirements of 326 IAC 20-6 are not applicable and are not included in the permit.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance determination requirements applicable to this source are as follows:

(a) VOC Compliance Determination

(1) Compliance with the VOC limit for Line B shall be determined by the following equation:

$$\text{VOC} = \sum_{m=1}^{12}\left(\left(\frac{(Ef+1)*D}{2000lbs/ton}\right)+0.007\right)_m$$

Where:
D = The amount of baked product produced during month m (tons/month);
E_f = The VOC emission factor (lb of VOC/ton of baked product); and
m = The compliance period is one (1) calendar month.

The Permittee shall use 3.71 lbs VOC/ton for the emission factor (E_f), or the emission factor determined from a valid compliance demonstration, which results in an emission factor higher than 3.71 lbs VOC/ton.

(2) Compliance with the VOC limit for Line H shall be determined by the following equation:

$$\text{VOC} = \sum_{m=1}^{12}\left(\left(\frac{(Ef+1)*D}{2000lbs/ton}\right)+0.007\right)_m$$

Where:
D = The amount of baked product produced during month m (tons/month);
E_f = The VOC emission factor (lb of VOC/ton of baked product); and
m = The compliance period is one (1) calendar month.

The Permittee shall use 3.71 lbs VOC/ton for the emission factor (E_f), or the emission factor determined from a valid compliance demonstration, which results in an emission factor higher than 3.71 lbs VOC/ton.

(b) Emission Controls Operation

Bag filters on the flour silos for particulate emissions control shall be in operation and control particulate emissions whenever the flour silos (Silos C1 and C2) are in operation.

(c) Testing Requirements

Not later than 60 days after a change in the dough formulation of the muffins, which is expected to result in an increase of VOC emissions, the Permittee shall perform VOC testing of the one (1) muffin griddle, identified as Unit B, utilizing methods approved by the commissioner.

Not later than 60 days after a change in the dough formulation of the muffins, which is expected to result in an increase of VOC emissions, the Permittee shall perform VOC testing of the one (1) muffin griddle, identified as Unit H, utilizing methods approved by the commissioner

These requirements are required to ensure compliance with 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) and 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).

The compliance monitoring requirements applicable to this source are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Silo C1 Fabric Filter	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Silo C2 Fabric Filter	Visible Emissions	Daily	Normal-Abnormal	Response Steps

These monitoring conditions are necessary because the fabric filters must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from applications and additional information submitted by the applicant. Applications for the purpose of this review were received on December 21, 2011, September 28, 2012, and February 19, 2013.

The construction and operation of this source shall be subject to the conditions of the attached proposed Significant Source Modification No. 151-32848-00060 and Part 70 Operating Permit No. T151-31292-00060. The staff recommends to the Commissioner that the Significant Source Modification No. 151-32848-00060 and Part 70 Operating Permit No. T151-31292-00060 be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Jason R. Krawczyk at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5174 or toll free at 1-800-451-6027 extension 4-5174.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Indiana Department of Environmental Management

Office of Air Quality

Appendix A – Emission Calculations
Technical Support Document (TSD)
Part 70 Operating Permit

Source Description and Location

Company Name:	New Horizons Baking Company
Address City IN Zip:	700 W. Water Street, Fremont, Indiana 46737
County:	Steuben
SIC / NAICS Code:	2051 31181
Significant Source Modification No.:	151-32848-00060
Part 70 Operating Permit No.:	T151-31292-00060
Permit Reviewer:	Jason R. Krawczyk
Date:	March 7, 2013

Summary of Potential to Emit

The following tables summarize the potential to emit for New Horizons Baking Company. The subsequent pages of this document contain the detailed calculations for each of the processes at New Horizons Baking Company.

SUMMARY OF EMISSIONS

Uncontrolled / Unlimited Emissions (Tons/Yr)																			
Pollutant	Bun Line (Line A)			Muffin Line (Line B)			Muffin Line (Line H)			Silo Loading	Bun Line (Line A) Ingredient Handling	Muffin Line (Line B) Ingredient Handling	Muffin Line (Line H) Ingredient Handling	Boilers (D &E)	Heaters (F1 - F12)	Emergency Generator (Unit G)	VOC Storage Tanks	Insignificant Activities	Paved Roadways (Fugitive)	Total
	Oven (Unit A)	Proof Box	Nat. Gas	Griddle (Unit B)	Proof Box	Nat. Gas	Griddle (Unit H)	Proof Box	Nat. Gas										
PM	-	-	0.04	-	-	0.03	-	-	0.03	103.15	9.70	4.27	3.84	0.04	0.01	3.4E-05	-	-	0.19	121.10
PM10	-	-	0.15	-	-	0.12	-	-	0.12	36.14	2.66	1.17	1.05	0.14	0.04	2.6E-07	-	-	0.04	41.59
PM2.5	-	-	0.15	-	-	0.12	-	-	0.12	36.14	2.66	1.17	1.05	0.14	0.04	2.6E-07	-	-	0.01	41.59
SO2	-	-	0.01	-	-	9.5E-03	-	-	0.01	-	-	-	-	0.01	3.1E-03	2.0E-06	-	-	-	0.05
NOx	-	-	1.98	-	-	1.59	-	-	1.59	-	-	-	-	1.89	0.52	2.9E-03	-	-	-	7.56
VOC	62.15	16.86	0.11	27.62	7.45	0.09	24.86	6.70	0.09	-	-	-	-	0.10	0.03	5.0E-03	0.02	0.11	-	146.19
CO	-	-	1.66	-	-	1.33	-	-	1.33	-	-	-	-	1.59	0.43	1.9E-03	-	-	-	6.35
GHGs as CO2e	-	-	2,385	-	-	1,918	-	-	1,918	-	-	-	-	2,281	622	4.7E-01	-	-	-	9,125
HAP	1.86	0.51	-	0.83	0.22	-	0.75	0.20	-	-	-	-	-	-	-	2.9E-05	-	-	-	4.37
HAP Hexane	-	-	0.04	-	-	0.03	-	-	0.03	-	-	-	-	3.4E-02	9.3E-03	3.8E-06	-	-	-	0.14
Combined HAPs	1.86	0.51	0.04	0.83	0.22	0.03	0.75	0.20	0.03	-	-	-	-	3.6E-02	9.7E-03	2.4E-04	-	-	-	4.51

Controlled / Unlimited Emissions (Tons/Yr)																			
Pollutant	Bun Line (Line A)			Muffin Line (Line B)			Muffin Line (Line H)			Silo Loading	Bun Line (Line A) Ingredient Handling	Muffin Line (Line B) Ingredient Handling	Muffin Line (Line H) Ingredient Handling	Boilers (D &E)	Heaters (F1 - F12)	Emergency Generator (Unit G)	VOC Storage Tanks	Insignificant Activities	Paved Roadways (Fugitive)	Total
	Oven (Unit A)	Proof Box	Nat. Gas	Griddle (Unit B)	Proof Box	Nat. Gas	Griddle (Unit H)	Proof Box	Nat. Gas										
PM	-	-	0.04	-	-	0.03	-	-	0.03	1.03	9.70	4.27	3.84	0.04	0.01	3.4E-05	-	-	0.19	18.98
PM10	-	-	0.15	-	-	0.12	-	-	0.12	0.36	2.66	1.17	1.05	0.14	0.04	2.6E-07	-	-	0.04	5.81
PM2.5	-	-	0.15	-	-	0.12	-	-	0.12	0.36	2.66	1.17	1.05	0.14	0.04	2.6E-07	-	-	0.01	5.81
SO2	-	-	0.01	-	-	9.5E-03	-	-	0.01	-	-	-	-	0.01	3.1E-03	2.0E-06	-	-	-	0.05
NOx	-	-	1.98	-	-	1.59	-	-	1.59	-	-	-	-	1.89	0.52	2.9E-03	-	-	-	7.56
VOC	62.15	16.86	0.11	27.62	7.45	0.09	24.86	6.70	0.09	-	-	-	-	0.10	0.03	5.0E-03	0.02	0.11	-	146.19
CO	-	-	1.66	-	-	1.33	-	-	1.33	-	-	-	-	1.59	0.43	1.9E-03	-	-	-	6.35
GHGs as CO2e	-	-	2,385	-	-	1,918	-	-	1,918	-	-	-	-	2,281	622	4.7E-01	-	-	-	9,125
HAP	1.86	0.51	-	0.83	0.22	-	0.75	0.20	-	-	-	-	-	-	-	2.9E-05	-	-	-	4.37
HAP Hexane	-	-	3.6E-02	-	-	2.9E-02	-	-	0.03	-	-	-	-	3.4E-02	9.3E-03	3.8E-06	-	-	-	0.14
Combined HAPs	1.86	0.51	3.7E-02	0.83	0.22	3.0E-02	0.75	0.20	0.03	-	-	-	-	3.6E-02	9.7E-03	2.4E-04	-	-	-	4.51

Potential to Emit After Issuance (Tons/Yr)																			
Pollutant	Bun Line (Line A)			Muffin Line (Line B)			Muffin Line (Line H)			Silo Loading	Bun Line (Line A) Ingredient Handling	Muffin Line (Line B) Ingredient Handling	Muffin Line (Line H) Ingredient Handling	Boilers (D &E)	Heaters (F1 - F12)	Emergency Generator (Unit G)	VOC Storage Tanks	Insignificant Activities	Paved Roadways (Fugitive)	Total
	Oven (Unit A)	Proof Box	Nat. Gas	Griddle (Unit B)	Proof Box	Nat. Gas	Griddle (Unit H)	Proof Box	Nat. Gas										
PM	-	-	0.04	-	-	0.03	-	-	0.03	103.15	9.70	4.27	3.84	0.04	0.01	3.4E-05	-	-	0.19	121.10
PM10	-	-	0.15	-	-	0.12	-	-	0.12	36.14	2.66	1.17	1.05	0.14	0.04	2.6E-07	-	-	0.04	41.59
PM2.5	-	-	0.15	-	-	0.12	-	-	0.12	36.14	2.66	1.17	1.05	0.14	0.04	2.6E-07	-	-	0.01	41.59
SO2	-	-	0.01	-	-	9.5E-03	-	-	0.01	-	-	-	-	1.1E-02	3.1E-03	2.0E-06	-	-	-	0.05
NOx	-	-	1.98	-	-	1.59	-	-	1.59	-	-	-	-	1.89	0.52	2.9E-03	-	-	-	7.56
VOC	62.15	16.86	0.11	35.16			31.65			-	-	-	-	0.10	0.03	5.0E-03	0.02	0.11	-	146.19
CO	-	-	1.66	-	-	1.33	-	-	1.33	-	-	-	-	1.59	0.43	1.9E-03	-	-	-	6.35
GHGs as CO2e	-	-	2,385	-	-	1,918	-	-	1,918	-	-	-	-	2,281	622	4.7E-01	-	-	-	9,125
HAP	1.86	0.51	-	0.83	0.22	-	0.75	0.20	-	-	-	-	-	-	-	2.9E-05	-	-	-	4.37
HAP Hexane	-	-	3.6E-02	-	-	2.9E-02	-	-	0.03	-	-	-	-	3.4E-02	9.3E-03	3.8E-06	-	-	-	0.14
Combined HAPs	1.86	0.51	3.7E-02	0.83	0.22	3.0E-02	0.75	0.20	0.03	-	-	-	-	3.6E-02	9.7E-03	2.4E-04	-	-	-	4.51

Note:
Fugitive PM, PM10, and PM2.5 from paved roadways, and VOC from tanks and degreasing operations are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

	PM	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**GHGs as CO_2e**	**Acet.**	**Total HAPs**
PTE After Issuance (ton/yr)	121.10	41.59	41.59	4.5E-02	7.56	146.19	6.35	9,125	4.37	4.51
Part 70 Major Source Threshold	NA	100	100	100	100	100	100	100,000	10	25
PSD Major Source Threshold	250	250	250	250	250	250	250	100,000	NA	NA

SUMMARY OF EMISSIONS - Potential to Emit of Modification

Unrestricted Emissions for Modification (Tons/Yr)												
Pollutant	Bun Line (Line A)			Muffin Line (Line B)			Muffin Line (Line H)				Silo Loading	Total
	Proof Box	Ingredient Handling	Nat. Gas	Proof Box	Ingredient Handling	Nat. Gas	Griddle (Unit H)	Proof Box	Nat. Gas	Ingredient Handling		
PM	-	9.70	-	-	4.27	-	-	-	0.03	3.84	21.32	39.16
PM_{10}	-	2.66	-	-	1.17	-	-	-	0.12	1.05	7.47	12.47
$PM_{2.5}$	-	2.66	-	-	1.17	-	-	-	0.12	1.05	7.47	12.47
SO_2	-	-	-	-	-	-	-	-	0.01	-	-	0.01
NO_X	-	-	-	-	-	-	-	-	1.59	-	-	1.59
VOC	16.86	-	-	7.45	-	-	24.86	6.70	0.09	-	-	55.96
CO	-	-	-	-	-	-	-	-	1.33	-	-	1.33
CO_2e	-	-	2,385	-	-	1,918	-	-	1,918	-	-	6,221
HAP Acetaldehyde	0.51	-	-	0.22	-	-	0.75	0.20	-	-	-	1.68
HAP Hexane	-	-	-	-	-	-	-	-	0.03	-	-	0.03
Combined HAPs	0.51	-	-	0.22	-	-	0.75	0.20	0.03	-	-	1.71

Unlimited PTE from Bun Line (Line A)
Bun Oven (Unit A) and Proof Box (Line A Proof Box) Emissions

VOC and HAP Emissions from Bread Fermentation:

Maximum Production Rate: **3.85 tons/hr** 7700 lb bread/hr

According to AP-42, Chapter 9.9.6 - Bread Baking, the VOC emission factor from the bread baking process can be estimated with the following equation:

E.F. = 0.95 Yi + 0.195 ti - 0.51S - 0.86ts + 1.90

Where	Yi =	2.81	Initial baker's percent of yeast
	ti =	2.75	Total yeast action time in hours
	S =	1.25	Final (spike) baker's percent of yeast
	ts =	0.91	Spiking time in hours
	E.F. =	**3.69**	lb of VOC/ton of baked bread

Therefore, the potential uncontrolled VOC emissions from bread baking =

3.85 tons/hr x 3.69 lbs/ton x 8760 hrs/yr x 1 tons/2000 lbs = **62.15 tons/yr**

VOCs emitted during fermentation (leavening) assumed to be 97% ethanol and 3% acetaldehyde (VOC/HAP), based on the following document and supporting information:
1. "Alternative Control Technology Document for Bakery Oven Emissions" (EPA 453/R-92-017, December 1992)
2. Henderson, D.C., 1977, "Commercial Bakeries as a Major Source of Reactive Volatile Organic Gases", U.S. EPA, Region XI Surveillance and Analysis Division

Therefore, the potential uncontrolled HAP (acetaldehyde) emissions from bread baking =

62.15 tons/yr x 3% = **1.86 tons/yr**

VOC Emissions from Line A Proof Box:

Emission Unit ID	Emission Factor (lb/ton)	Uncontrolled Potential Oven Emissions VOC (tons/yr)	Uncontrolled Potential Oven Emissions Acetaldehyde (tons/yr)	Uncontrolled Potential Proof Box Emissions VOC (tons/yr)	Uncontrolled Potential Proof Box Emissions Acetaldehyde (tons/yr)
Line A Proof Box	1.00	62.15	1.86	**16.86**	**0.51**

Note:
The source has agreed to utilize the average emisison factor determined through proof box testing performed in June 2010 at the Alpha Baking Co., Inc. facility in LaPorte, IN.
IDEM, OAQ has agreed to accept this method of calculating VOC potential emissions from the proof box.

Methodology:
Potential Emissions (ton/year) = Emission Factor (lb/ton) x Maximum Throughput (tons/year) x (1 ton/2000 lbs)
Potential Acetaldehyde Emissions (ton/year) = Potential VOC Emissions (ton/yr) x 3%

Unlimited PTE from Bun Line (Line A)

Line A Oven

Natural Gas Combustion

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
4.60	39.51

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.04	0.15	0.15	0.01	1.98	0.11	1.66

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Benzene	Dichloro-benzene	Formal-dehyde	Hexane	Toluene
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.80	3.4E-03
Potential Emission in tons/yr	4.1E-05	2.4E-05	1.5E-03	3.6E-02	6.7E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	9.9E-06	2.2E-05	2.8E-05	7.5E-06	4.1E-05

Combined HAPs: 0.04

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMCF	120,000	2.3	2.2
Potential Emission in tons/yr	2,370	0.045	0.043
Summed Potential Emissions in tons/yr	2,370		
CO2e Total in tons/yr	2,385		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Unlimited PTE from Muffin Line (Line B)
Griddle (Unit B) and Proof Box (Line B Proof Box) Emissions

VOC and HAP Emissions from Bread Fermentation:

Maximum Production Rate: **1.70 tons/hr** 3400 lb bread/hr

According to AP-42, Chapter 9.9.6 - Bread Baking, the VOC emission factor from the bread baking process can be estimated with the following equation:

E.F. = 0.95 Yi + 0.195 ti - 0.51S - 0.86ts + 1.90

Where
Yi = Initial baker's percent of yeast
ti = Total yeast action time in hours
S = Final (spike) baker's percent of yeast
ts = Spiking time in hours
E.F. = lb of VOC/ton of baked bread

Maximum VOC emission factor: **3.71** lb/ton based on a stack test performed November 2010.

Therefore, the potential uncontrolled VOC emissions from bread baking =

1.70 tons/hr x 3.71 lbs/ton x 8760 hrs/yr x 1 tons/2000 lbs = **27.62 tons/yr**

VOCs emitted during fermentation (leavening) assumed to be 97% ethanol and 3% acetaldehyde (VOC/HAP), based on the following document and supporting information:
1. "Alternative Control Technology Document for Bakery Oven Emissions" (EPA 453/R-92-017, December 1992)
2. Henderson, D.C., 1977, "Commercial Bakeries as a Major Source of Reactive Volatile Organic Gases", U.S. EPA, Region XI Surveillance and Analysis Division

Therefore, the potential uncontrolled HAP (acetaldehyde) emissions from bread baking =

27.62 tons/yr x 3% = **0.83 tons/yr**

VOC Emissions from Line B Proof Box:

Emission Unit ID	Emission Factor (lb/ton)	Uncontrolled Potential Oven Emissions VOC (tons/yr)	Uncontrolled Potential Oven Emissions Acetaldehyde (tons/yr)	Uncontrolled Potential Proof Box Emissions VOC (tons/yr)	Uncontrolled Potential Proof Box Emissions Acetaldehyde (tons/yr)
Line B Proof Box	1.00	27.62	0.83	**7.45**	**0.22**

Note:
The source has agreed to utilize the average emisison factor determined through proof box testing performed in June 2010 at the Alpha Baking Co., Inc. facility in LaPorte, IN.
IDEM, OAQ has agreed to accept this method of calculating VOC potential emissions from the proof box.

Methodology:
Potential Emissions (ton/year) = Emission Factor (lb/ton) x Maximum Throughput (tons/year) x (1 ton/2000 lbs)
Potential Acetaldehyde Emissions (ton/year) = Potential VOC Emissions (ton/yr) * 3%

Unlimited PTE from Muffin Line (Line B)
Line B Griddle (Unit B)
Natural Gas Combustion

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.70	31.78

	Pollutant						
Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	direct PM2.5* 7.6	SO2 0.6	NOx 100 **see below	VOC 5.5	CO 84
Potential Emission in tons/yr	0.03	0.12	0.12	0.01	1.59	0.09	1.33

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Benzene	Dichloro-benzene	Formal-dehyde	Hexane	Toluene
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.80	3.4E-03
Potential Emission in tons/yr	3.3E-05	1.9E-05	1.2E-03	2.9E-02	5.4E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	7.9E-06	1.7E-05	2.2E-05	6.0E-06	3.3E-05

Combined HAPs: 0.03

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMCF	120,000	2.3	2.2
Potential Emission in tons/yr	1,907	0.037	0.035
Summed Potential Emissions in tons/yr	1,907		
CO2e Total in tons/yr	1,918		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Unlimited PTE from Muffin Line (Line H)
Griddle (Unit H) and Proof Box (Line H Proof Box) Emissions

VOC and HAP Emissions from Bread Fermentation:

Maximum Production Rate: **1.53 tons/hr** 3060 lb bread/hr

According to AP-42, Chapter 9.9.6 - Bread Baking, the VOC emission factor from the bread baking process can be estimated with the following equation:

E.F. = 0.95 Yi + 0.195 ti - 0.51S - 0.86ts + 1.90

Where
Yi = Initial baker's percent of yeast
ti = Total yeast action time in hours
S = Final (spike) baker's percent of yeast
ts = Spiking time in hours
E.F. = lb of VOC/ton of baked bread

Maximum VOC emission factor: **3.71** lb/ton based on the stack test performed November 2010 on Muffin Line B.

Therefore, the potential uncontrolled VOC emissions from bread baking =

1.53 tons/hr x 3.71 lbs/ton x 8760 hrs/yr x 1 tons/2000 lbs = **24.86 tons/yr**

VOCs emitted during fermentation (leavening) assumed to be 97% ethanol and 3% acetaldehyde (VOC/HAP), based on the following document and supporting information:
1. "Alternative Control Technology Document for Bakery Oven Emissions" (EPA 453/R-92-017, December 1992)
2. Henderson, D.C., 1977, "Commercial Bakeries as a Major Source of Reactive Volatile Organic Gases", U.S. EPA, Region XI Surveillance and Analysis Division

Therefore, the potential uncontrolled HAP (acetaldehyde) emissions from bread baking =

24.86 tons/yr x 3% = **0.75 tons/yr**

VOC Emissions from Line H Proof Box:

Emission Unit ID	Emission Factor (lb/ton)	Uncontrolled Potential Oven Emissions VOC (tons/yr)	Uncontrolled Potential Oven Emissions Acetaldehyde (tons/yr)	Uncontrolled Potential Proof Box Emissions VOC (tons/yr)	Uncontrolled Potential Proof Box Emissions Acetaldehyde (tons/yr)
Line H Proof Box	1.00	24.86	0.75	**6.70**	**0.20**

Note:
The source has agreed to utilize the average emisison factor determined through proof box testing performed in June 2010 at the Alpha Baking Co., Inc. facility in LaPorte, IN.
IDEM, OAQ has agreed to accept this method of calculating VOC potential emissions from the proof box.

Methodology:
Potential Emissions (ton/year) = Emission Factor (lb/ton) x Maximum Throughput (tons/year) x (1 ton/2000 lbs)
Potential Acetaldehyde Emissions (ton/year) = Potential VOC Emissions (ton/yr) * 3%

Unlimited PTE from Muffin Line (Line H)
Line H Griddle (Unit H)
Natural Gas Combustion

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.70	31.78

	Pollutant						
Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	direct PM2.5* 7.6	SO2 0.6	NOx 100 **see below	VOC 5.5	CO 84
Potential Emission in tons/yr	0.03	0.12	0.12	0.01	1.59	0.09	1.33

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Benzene	Dichloro-benzene	Formal-dehyde	Hexane	Toluene
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.80	3.4E-03
Potential Emission in tons/yr	3.3E-05	1.9E-05	1.2E-03	2.9E-02	5.4E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	7.9E-06	1.7E-05	2.2E-05	6.0E-06	3.3E-05

Combined HAPs: 0.03

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMCF	120,000	2.3	2.2
Potential Emission in tons/yr	1,907	0.037	0.035
Summed Potential Emissions in tons/yr	1,907		
CO2e Total in tons/yr	1,918		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Emissions from Dry Ingredient Storage and Conveying

Uncontrolled Emission Factor (lbs/ton)*	
PM	PM10 / PM2.5
3.14	1.10

Filter Unit Control Efficiency
PM/PM10/PM2.5
99.0%

Potential to Emit (PTE) of Particulate (PM / PM10 / PM2.5)

Emission Unit	Main Silo Throughput (lbs/hr)	Flour Recovery (20%)** (lbs/hr)	Maximum Ingredient Throughput (lbs/hr)	Maximum Ingredient Throughput (tons/hr)	Uncontrolled PTE of PM (lbs/hr)	Uncontrolled PTE of PM10/PM2.5 (lbs/hr)	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10/PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10/PM2.5 (tons/yr)
Silo C1	6,250	1,250	7,500	3.75	11.78	4.13	51.57	18.07	0.52	0.18
Silo C2	6,250	1,250	7,500	3.75	11.78	4.13	51.57	18.07	0.52	0.18
Total	**12,500**	**2,500**	**15,000**	**7.50**	**23.55**	**8.25**	**103.15**	**36.14**	**1.03**	**0.36**

Note:
*The uncontrolled potential emissions of particulate from dry ingredient storage and conveying before controls are estimated using AP-42 Table 11.12-2 emission factors for the uncontrolled truck unloading of cement supplement to elevated storage silo (pneumatic). No AP-42 emission factors exist for dry ingredient (including flour) pneumatic conveyance. Ingredient throughput is limited by the maximum throughput of the ovens. Therefore, the maximum ingredient throughput for dry ingredient storage and conveying has been set equal to the combined maximum material throughput through the Line A and Line B ovens.
**Flour is recovered throughout the process and returned to the silos to be reused. A 20% recovery factor is added to the total throughput to account for this additional flour usage.
Assumed PM10 = PM2.5

Methodology:
Maximum Hourly Throughput (tons/hr) = [Maximum Hourly Throughput (lbs/hr)] / [2000 lbs/ton]
Uncontrolled PTE of PM or PM10 (lbs/hour) = [Maximum Hourly Throughput (tons/hr)] x [Emission Factor (lbs/ton)]
Uncontrolled PTE of PM or PM10 (tons/year) = [Uncontrolled PTE of PM or PM10 (lbs/hour)] x [8760 hours/year)] / [2000 lbs/ton]
Controlled PTE of PM or PM10 (tons/year) = [Uncontrolled PTE of PM or PM10 (tons/year)] x [1 - Control Efficiency]

Particulate Emissions from Dry/Mixed Ingredient Handling

The following calculations determine the emissions from the handling of flour and other dry ingredients to various emission units.

Emission Unit		Maximum Capacity		Emission Factors			Uncontrolled Potential to Emit					
				PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
ID #	*Description*	*lb/hr*	*tons/hr*	*lb/ton*	*lb/ton*	*lb/ton*	*lbs/hr*	*lbs/hr*	*lbs/hr*	*tons/yr*	*tons/yr*	*tons/yr*
Bun Line (Line A)												
Hopper B1	Weigh Hopper	4,577	2.289	0.0048	0.0028	0.0028	1.10E-02	6.41E-03	6.41E-03	0.048	0.028	0.028
Mixer B1	Dough Mixer	7,700	3.850	0.572	0.156	0.156	2.20	0.60	0.60	9.65	2.63	2.63
Hopper B2	Dusting Hopper	100	0.050	0.0048	0.0028	0.0028	2.40E-04	1.40E-04	1.40E-04	1.1E-03	6.1E-04	6.1E-04
Shaker B1	Zig Zag Boards (flour)	100	0.050	0.0048	0.0028	0.0028	2.40E-04	1.40E-04	1.40E-04	1.1E-03	6.1E-04	6.1E-04
						Total for Bun Line	2.21	0.61	0.61	**9.70**	**2.66**	**2.66**
Muffin Line (Line B)												
Hopper M1	Weigh Hopper	770	0.385	0.0048	0.0028	0.0028	1.85E-03	1.08E-03	1.08E-03	8.1E-03	4.7E-03	4.7E-03
Breaker M1	Cornmeal Bag Breaker	100	0.050	0.0048	0.0028	0.0028	2.40E-04	1.08E-02	1.08E-02	1.1E-03	6.1E-04	6.1E-04
Mixer M1	Dough Mixer	3,400	1.700	0.572	0.156	0.156	0.97	0.01	0.01	4.26	1.16	1.16
Shaker M1	Zig Zag Boards (corn Starch)	100	0.0500	0.0048	0.0028	0.0028	2.40E-04	1.40E-04	1.40E-04	1.1E-03	6.1E-04	6.1E-04
						Total for Muffin Line	0.97	0.02	0.02	**4.27**	**1.17**	**1.17**
Muffin Line (Line H)												
Hopper M2	Weigh Hopper	693	0.347	0.0048	0.0028	0.0028	1.66E-03	9.70E-04	9.70E-04	7.3E-03	4.2E-03	4.2E-03
Breaker M2	Cornmeal Bag Breaker	90	0.045	0.0048	0.0028	0.0028	2.16E-04	1.26E-04	1.26E-04	9.5E-04	5.5E-04	5.5E-04
Mixer M2	Dough Mixer	3,060	1.530	0.572	0.156	0.156	0.88	0.24	0.24	3.83	1.05	1.05
Shaker M2	Zig Zag Boards (corn Starch)	90	0.045	0.0048	0.0028	0.0028	2.16E-04	1.26E-04	1.26E-04	9.5E-04	5.5E-04	5.5E-04
						Total for Muffin Line	0.88	0.24	0.24	**3.84**	**1.05**	**1.05**
						Combined Total Emissions	4.07	0.87	0.87	**17.81**	**4.88**	**4.88**

Notes:
The emission factors are from AP-42, Ch. 11.12, Table 11.12-2 for hopper loading (SCC# 3-05-011-08) and mixer loading (SCC# 3-05-011-09).
$PM_{2.5}$ emissions assumed equal to PM_{10} emissions.

Methodology:
Maximum Capacity (tons/hr) = Maximum Capacity (lb/hr) ÷ 2000 lb/ton
Uncontrolled Emissions (tons/yr) = Maximum Capacity (tons/hr) x Emission Factor (lb/ton) x 8760 hr/yr ÷ 2000 lb/ton

Boilers D & E
Natural Gas Combustion

	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Date Installed
Unit D	2.6	22.33	1979
Unit E	1.8	15.46	1996
	4.40	37.79	

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.04	0.14	0.14	0.01	1.89	0.10	1.59

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combinec
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculat

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Benzene	Dichloro-benzene	Formal-dehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.80	3.4E-03
Potential Emission in tons/yr	4.0E-05	2.3E-05	1.4E-03	3.4E-02	6.4E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	9.4E-06	2.1E-05	2.6E-05	7.2E-06	4.0E-05

Combined HAPs: 0.04

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	2,267	0.04	0.04
Summed Potential Emissions in tons/yr	2,267		
CO2e Total in tons/yr	2,281		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Heaters F1 - F12
Natural Gas Combustion

	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Date Installed
Unit F1	0.1	0.86	1979
Unit F2	0.1	0.86	1979
Unit F3	0.1	0.86	1979
Unit F4	0.1	0.86	1979
Unit F5	0.1	0.86	1979
Unit F6	0.1	0.86	1979
Unit F7	0.1	0.86	1979
Unit F8	0.1	0.86	1979
Unit F9	0.1	0.86	2004
Unit F10	0.1	0.86	2004
Unit F11	0.1	0.86	2004
Unit F12	0.1	0.86	2004
Total	**1.20**	**10.31**	

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	9.8E-03	3.9E-02	3.9E-02	3.1E-03	0.52	2.8E-02	0.43

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 3

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Benzene	Dichloro-benzene	Formal-dehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.1E-05	6.2E-06	3.9E-04	9.3E-03	1.8E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.6E-06	5.7E-06	7.2E-06	2.0E-06	1.1E-05

Combined HAPs: 0.01

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	618	0.01	0.01
Summed Potential Emissions in tons/yr	618		
CO2e Total in tons/yr	622		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Emissions from Emergency Generator (Unit G)

Engine Rating hp	Heat Input Capacity MMBtu/hr	Maxium Heat Input Capacity MMBtu/yr	Operating Time (hrs/yr)
5.36	0.014	6.83	500

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	9.91E-03	7.71E-05	7.71E-05	5.88E-04	0.847	1.47	0.557
Potential Emission in tons/yr	3.4E-05	2.6E-07	2.6E-07	2.0E-06	2.9E-03	5.0E-03	1.9E-03

*PM emission factor is condensable PM only. PM10 and PM2.5 emission factors are filterable only.
Emission Factors from AP-42 Chapter 3.2, Table 3.2-2 for 4-stroke lean-burn engines <90% Load.

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Acetaldehyde	Acrolein	Benzene	Formal-dehyde	Methanol
Emission Factor in lb/MMBtu	8.4E-03	5.1E-03	4.4E-04	5.3E-02	2.5E-03
Potential Emission in tons/yr	2.9E-05	1.8E-05	1.5E-06	1.8E-04	8.5E-06

	Ethylbenzene	Styrene	Hexane	Toluene	Xylene
Emission Factor in lb/MMBtu	3.97E-05	2.36E-05	1.11E-03	4.08E-04	1.84E-04
Potential Emission in tons/yr	1.4E-07	8.1E-08	3.8E-06	1.4E-06	6.3E-07
				Total HAPs:	**2.4E-04**

HAP emission factors are from AP-42 Chapter 3.2, Table 3.2-2.
Additional HAPs emission factors are available in AP-42, Chapter 3.2.

Methodology:
MMBtu = 1,000,000 Btu
Maximum Heat Input Capacity (MMBtu/yr) = Heat Input Capacity (MMBtu/hr) x 500 hrs/yr
Emission (tons/yr) = Maximum Heat Input Capacity (MMBtu/yr) x Emission Factor (lb/MMBtu)/2,000 lb/ton

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	110	1.25	1.00E-04
Potential Emission in tons/yr	0.38	4.3E-03	3.4E-07
Summed Potential Emissions in tons/yr	0.38		
CO2e Total in tons/yr	0.47		

Methodology:
The N2O Emission Factor is from 40 CFR 98, Subpart C, Table C-2 for natural gas.
The CO2 and CH4 Emission Factors are from AP 42, Table 3.2, Table 3.2-2.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Maximum Heat Input Capacity (MMBtu/yr) x Emission Factor (lb/MMBtu)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

*As defined in the September 6, 1995 memorandum from John S. Seitz of US EPA on the subject of "Calculating Potential to Emit for Emergency Generators", an emergency generator's sole function is to provide back-up power when power from the local utility is interrupted. The only circumstances under which an emergency generator would operate when utility power is available are during operator training or brief maintenance checks. The generator's potential to emit is based on an operating time of 500 hours per year as set forth in the EPA memo.

Process Tanks and Insignificant Activites
VOC Emissions

Process Tanks

Tank ID	lb/year	lb/hr	VOC Tons/Yr
HD-1 Oven	0.05	5.7E-06	2.5E-05
HD-2 Developer	0.05	5.7E-06	2.5E-05
GL-1 Griddle	0.05	5.7E-06	2.5E-05
PRO-1 Proofer	0.05	5.7E-06	2.5E-05
Oven-1	0.05	5.7E-06	2.5E-05
Maintenance Solvent 1	17.47	2.0E-03	0.01
Water Soluble	17.64	2.0E-03	0.01
K-Lub	0.06	6.8E-06	3.0E-05
		Total:	**0.02**

Emissions were calculated using Tanks 4.0.9d software and submitted by the source.

Insignificant Activities

Material	Usage (gal/yr)	lb of VOC/ gal of material	VOC Emissions (tpy)
Oil - GL-1	130	0.01	6.5E-04
Oil - Oven - 1	140	0.01	7.0E-04
Oil - K-lub	660	0.01	3.3E-03
Degreasing - Maintenance Solvent 105	30	6.7	0.10
		Total:	**0.11**

Methodology:
VOC Emissions (tpy) = Usage (gal/yr) x lb of VOC / gal of material x 1 lb / 2000 ton

Fugitive Dust Emissions - Paved Roads

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip) - tractor trailer	8	1	8	20.00	160.0	1320	0.250	2.0	730.0
Vehicle (entering plant) (one-way trip) - car	80	1	80	1.65	132.0	1320	0.250	20.0	7300.0
Vehicle (leaving plant) (one-way trip) - tractor trailer	8	1	8	27.50	220.0	1320	0.250	2.0	730.0
Vehicle (leaving plant) (one-way trip) - car	80	1	80	1.65	132.0	1320	0.250	20.0	7300.0
		Total	**176**		**644.0**			**44.0**	**16060.0**

Average Vehicle Weight Per Trip = 3.7 tons/trip
Average Miles Per Trip = 0.25 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	3.7	3.7	3.7	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m^2 = ubiquitous baseline silt loading value for ADT < 500 - Table 13.2.1-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.026	0.005	0.0013	lb/mile
Mitigated Emission Factor, Eext =	0.024	0.005	0.0012	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip) - tractor trailer	0.009	0.002	4.6E-04	0.009	0.002	4.3E-04
Vehicle (entering plant) (one-way trip) - car	0.095	0.019	0.005	0.087	0.017	0.004
Vehicle (leaving plant) (one-way trip) - tractor trailer	0.009	0.002	4.6E-04	0.009	0.002	4.3E-04
Vehicle (leaving plant) (one-way trip) - car	0.095	0.019	0.005	0.087	0.017	0.004
	0.208	**0.042**	**0.010**	**0.191**	**0.038**	**0.009**

Methodology

Total Weight driven per day (ton/day)	= [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip)	= [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day)	= [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip)	= SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip)	= SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr)	= [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr)	= [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Controlled PTE (tons/yr)	= [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit

326 IAC 6-2 Evaluation

Boilers	Installation Date	Rating (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) (if Q <10)	Applicable Rule
Unit D	1979	2.6	2.6	0.6	326 IAC 6-2-3
Unit E	1996	1.8	4.4	0.6	327 IAC 6-2-4

< 9/21/1983

[326 IAC 6-2-3] $Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$ = Actual *569.5* / *186.27*

Where:
- Pt = Pounds of particulate matter emitted per million Btu
- C = Maximum ground level concentration with respect to — 50
- a = Plume rise factor. The value **0.67** shall be used for Q — 0.67
- h = Stack height in feet. — 17
- Q = Total source maximum operating capacity rating in
- N = Number of stacks in fuel burning operation. — 2

(e) Particulate emissions from any facility used for indirect heating purposes which has 250 mmBtu/hr heat input or less and which began operation after June 8, 1972, shall in no case exceed 0.6 lb/mmBtu heat input.

=> 9/21/1983

[326 IAC 6-2-4] $Pt = \frac{1.09}{Q^{0.26}}$

Where:
- Pt = Pounds of particulate matter emitted per million Btu
- Q = Total source maximum operating capacity rating in

For Q less than 10 mmBtu/hr, Pt shall not exceed 0.6.

326 IAC 6-3-2 Particulate Emission Rate Limitations

			Process Weight, P		P<=60,000 lb/hr
			each unit	each unit	$E = 4.10\ P^{0.67}$
PM Control Device	Stack/Vent	Process	P (lb/hr)	P (ton/hr)	E (lb/hr)
Filter	C1	Silo C1	7,500	3.75	9.940
Filter	C2	Silo C2	7,500	3.75	9.940
Flour Recovery	No Stack	Mixer B1	7,700	3.85	10.117
Flour Recovery	No Stack	Mixer M1	3,400	1.70	5.850
Flour Recovery	No Stack	Mixer M2	3,060	1.53	5.452

For P <= 60,000 lb/hr $E = 4.10\ P^{0.67}$

where: E = Rate of emission in pounds per hour.

P = Process weight rate in tons per hour.

Indiana Department of Environmental Management
Office of Air Quality

Appendix B
Best Available Control Technology (BACT) Analysis Determination

Source Background and Description

Source Name:	New Horizons Baking Company
Source Location:	700 W. Water Street, Fremont, IN 46737
County:	Steuben
SIC Code:	2051 (Bread and Other Bakery Products, Except Cookies and Crackers)
Significant Source Modification No.:	151-32848-00060
Part 70 Operating Permit No.:	T151-31292-00060
Permit Reviewer:	Jason R. Krawczyk

Background Information

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has performed a Best Available Control Technology (BACT) review for the the existing commerial bread baking plant of New Horizon Baking Company located at 700 W. Water Street, Fremont, Indiana 46737. The following existing emission unit was constructed after January 1, 1980, has the potential to emit volatile organic compounds greater than twenty-five (25) tons per twelve (12) consecutive month period and is not regulated under any other rule in 326 IAC 8. Pursuant to the provisions of 326 IAC 8-1-6 Best Available Control Technology, an analysis for VOC was performed for this unit:

(a) One (1) muffin line, identified as Line B, constructed in 1983 and modified in 2008, with a maximum throughput capacity of 3,400 pounds per hour, and consisting of:

(1) One (1) natural gas-fired muffin griddle, identified as Unit B, with a maximum heat input of 3.70 MMBtu per hour, exhausting to Stack B; and

(2) One (1) proof box, identified as Line B Proof Box.

Note: The muffin line is considered one facility for evaluation of 326 IAC 8-1-6.

IDEM, OAQ is performing an evaluation pursuant to the 326 IAC 8-1-6 for the existing muffin line, based on the following:

(A) Pursuant to Minor Source Operating Permit, M151-17821-00060, issued on October 16, 2003, New Horizons Baking Company constructed the muffin line (Line B) in 1983. Although constructed after January 1, 1980, the potential emissions of VOC from the muffin griddle were initially calculated to be less than 25 tons per year. Therefore, at that time, it was determined that 326 IAC 8-1-6 did not apply to the muffin line.

(B) Pursuant to MPR 151-26448-00060, issued on June 26, 2008, the heat input to the muffin griddle (Unit B) was increased to 5.96 MMBtu/hour and the maximum muffin production rate was increased to 4,200 lbs/hour. Based on the revised production rate, the potential VOC emissions of the muffin griddle were calculated to be greater than 25 tons/year. However, the source agreed to limit the VOC emissions from the muffin griddle to less than 25 tons/year rendering the requirements of 326 IAC 8-1-6 not applicable. New Horizons did not fully undertake the planned modification to the muffin griddle. Therefore, they have requested to correct the maximum

production capacity of the muffin line (Line B) to 3,400 lbs/hour (1.7 tons per hour) and to correct the maximum heat input capacity of Unit B to 3.70 MMBtu/hr.

(C) IDEM, OAQ has recently been incorporating the previously unaccounted VOC emissions from proof boxes into a facility's potential to emit summary and considering a proof box and oven to be one facility. The source has agreed to utilize the average emisison factor of 1.0 lb of VOC per ton of baked product determined through proof box testing performed in June 2010 at the Alpha Baking Co., Inc. facility in LaPorte, IN.

(D) Pursuant to MPR 151-28993-00060, issued on May 10, 2010, the muffin line (Line B) was revised to clarify the existence of one (1) proof box in addition to the one (1) muffin griddle (Unit B). The limitation to avoid the applicability of 326 IAC 8-1-6 was revised to account for the proof box emissions and VOC testing was added as a new requirement.

(E) On November 3, 2010, a stack test was performed on the muffin griddle (Unit B). Based on the stack test results, the VOC emission rate for Unit B was determined to be 3.71 lbs VOC per ton of throughput. Based on these stack test results, the potential VOC emissions from the muffin line (Line B) are as follows:

Muffin Griddle:
E (ton/yr) = 3.71 lb/ton x 1.7 ton/hr x 8760 hr/yr / 2000 lb/ton

= 27.62 ton/yr

Proof Box:
E (ton/yr) = 1.0 lb/ton x 1.7 ton/hr x 8760 hr/yr / 2000 lb/ton

= 7.45 ton/yr

Natural Gas Combustion:
E (ton/yr) = 5.5 lb/MMCF x 3.70 MMBtu/hr x 8760 hr/yr / 1020 MMBtu/MMCF / 2000 lb/ton

= 0.09 ton/yr

Total VOC Emissions = 35.16 ton/yr

(F) Since this emission rate results in potential VOC emissions greater than 25 tons per year, and the source would like the flexibility to operate at the maximum permitted capacity, the source has requested to remove the VOC BACT avoidance limit and undergo the BACT analysis for this process.

The following emission unit will be constructed after January 1, 1980, has the potential to emit volatile organic compounds greater than twenty-five (25) tons per twelve (12) consecutive month period and is not regulated under any other rule in 326 IAC 8. Pursuant to the provisions of 326 IAC 8-1-6 Best Available Control Technology, an analysis for VOC was performed for this unit:

(a) One (1) muffin line, identified as Line H, approved in 2013 for construction, with a maximum throughput capacity of 3,060 pounds per hour, and consisting of:

(1) One (1) natural gas-fired muffin griddle, identified as Unit H, with a maximum heat input of 3.70 MMBtu per hour, exhausting to Stack H; and

(2) One (1) proof box, identified as Line H Proof Box.

Note: The muffin line is considered one facility for evaluation of 326 IAC 8-1-6.

IDEM, OAQ conducts BACT analyses in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft U.S. EPA *New Source Review Workshop Manual*, which outlines the steps for conducting a top-down BACT analysis. Those steps are listed below.

(1) Identify all potentially available control options;

(2) Eliminate technically infeasible control options;

(3) Rank remaining control technologies;

(4) Evaluate the most effective controls and document the results; and

(5) Select BACT.

Also in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft U.S. EPA *New Source Review Workshop Manual*, BACT analyses take into account the energy, environmental, and economic impacts of the control options. Emission reductions may be determined through the application of available control techniques, process design, and/or operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause adverse environmental effects to public health and the environment.

VOC BACT Analysis

Step One: Identify All Potentially Available Control Technologies

Based on the information reviewed for this BACT determination, the following potentially available control technologies were identified for controlling VOC emissions, which are primarily emitted in the form of ethanol, from the baking line:

(a) Catalytic Oxidizer:

Catalytic oxidation is the process of oxidizing organic contaminants in a waste gas stream within a heated chamber containing a catalyst bed in the presence of oxygen for sufficient time to completely oxidize the organic contaminants to carbon dioxide and water. The catalyst is used to lower the activation energy of the oxidation reaction. The residence time, temperature, flow velocity and mixing, the oxygen concentration, and type of catalyst used in the combustion chamber affect the oxidation rate and destruction efficiency. Catalytic oxidizers typically require combustion of an auxiliary fuel (e.g., natural gas) to maintain combustion chamber temperature high enough to completely oxidize the contaminant gases. Catalytic oxidizers operate at lower temperatures and require less fuel than thermal oxidizers, they have a smaller footprint, and they need little or no insulation. Catalytic oxidizers are typically designed to have a residence time of 0.5 seconds or less and combustion chamber temperatures between 600 and 1,200°F. The types of catalysts used include platinum, platinum alloys, copper chromate, copper oxide, chromium, manganese, and nickel. These catalysts are deposited in thin layers on an inert substrate, usually a honeycomb shaped ceramic.

The two types of catalytic oxidation systems include recuperative and regenerative catalytic oxidizers, which are differentiated by the type of heat recovery equipment used. In a recuperative catalytic oxidizer, the waste gas stream is preheated using the heat content of the treated gas stream, resulting in improved oxidizer efficiency and significant fuel cost savings. In a regenerative thermal oxidizer, a high-density media such as a packed ceramic bed, which was heated in a previous cycle, is used to preheat the incoming waste gas stream, resulting in improved oxidizer efficiency and significant fuel cost savings. VOC destruction efficiencies greater than 98% are achievable under certain operating conditions (EPA-453/R-92-017). However, based on the information reviewed for this BACT determination, a VOC destruction

efficiency of 95% or a VOC outlet concentration of 10 ppmv or less is achievable on a consistent basis under normal operational conditions for a typical bread baking operation.

(b) Thermal Oxidizer:

Thermal oxidation is the process of oxidizing organic contaminants in a waste gas stream by raising the temperature above the auto-ignition point in the presence of oxygen for sufficient time to completely oxidize the organic contaminants to carbon dioxide and water. The residence time, temperature, flow velocity and mixing, and the oxygen concentration in the combustion chamber affect the oxidation rate and destruction efficiency. Thermal oxidizers typically require combustion of an auxiliary fuel (e.g., natural gas) to maintain combustion chamber temperature high enough to completely oxidize the contaminant gases. Thermal oxidizers are typically designed to have a residence time of one second or less and combustion chamber temperatures between 1,200 and 2,000°F.

The three types of thermal oxidation systems include direct flame, recuperative, and regenerative thermal oxidizers, which are differentiated by the type of heat recovery equipment used. A direct flame thermal oxidizer consists of only a combustion chamber with no heat recovery equipment. In a recuperative thermal oxidizer, the waste gas stream is preheated using the heat content of the treated gas stream, resulting in improved oxidizer efficiency and significant fuel cost savings. In a regenerative thermal oxidizer, a high-density media such as a packed ceramic bed, which was heated in a previous cycle, is used to preheat the incoming waste gas stream, resulting in improved oxidizer efficiency and significant fuel cost savings. In general, thermal oxidizers are less efficient at treating waste gas streams with highly variable flow rates since the variable flow rate results in varying residence times, combustion chamber temperature, and poor mixing. VOC destruction efficiencies greater than 98% are achievable under certain operating conditions (EPA-453/R-92-017). However, a VOC destruction efficiency of 95% is achievable on a consistent basis under normal operational conditions for a typical bakery operation.

(c) Wet Packed Bed Scrubber:

A wet packed bed scrubber is an absorption system in which a waste gas stream is interacted with a scrubbing liquid inside a contact chamber containing a bed of packing media in order to strip contaminant gases from the waste gas stream through the process of dissolution. Water is the most commonly used scrubbing liquid. Other solvents may be used depending on the components of the waste gas stream. Based on information reviewed for this BACT determination, a VOC destruction efficiency of 81% is achievable on a consistent basis under normal operational conditions for a typical bakery operation.

(d) Biofiltration:

Biofiltration is a process in which a waste gas stream is passed through a bed of peat, compost, bark, soil, gravel, or other inorganic media in order to strip organic contaminant gases from the waste gas stream through the process of dissolution in the bed moisture and adsorption to the bed media. Under aerobic conditions, microorganisms naturally present in the bed oxidize the organic contaminant gases within the bed to carbon dioxide, water, and additional biomass through metabolic processes. If the temperature of the waste gas stream is too high, the gas stream must be cooled to an optimum temperature before it can be treated in the biofilter in order to maintain the viability of the microorganisms. In addition, the bed must be monitored and maintained at an optimum moisture content and pH in order to prevent cracking of the bed media and to maintain the viability of the microorganisms.

(e) Carbon Adsorption Unit:

Carbon adsorption is a process by which VOC is retained on a granular carbon surface, which is highly porous and has a very large surface-to-volume ratio. Carbon adsorption systems can

operate in two phases: adsorption and desorption. Adsorption is rapid and removes most of the VOCs in the stream. Eventually, the adsorbent becomes saturated with the vapors and the system's efficiency drops. The adsorbent must be regenerated or replaced soon after efficiency begins to decline. In regenerative systems, the adsorbent is reactivated with steam or hot air in order to desorb the absorbate (VOC vapors) from the adsorbent, and the adsorbate and regenerated absorbent can be recovered for reuse or disposal. Non-regenerative systems require the removal of the spent adsorbent and replacement with fresh adsorbent.

(6) Condensation Unit:

Condensation is the process by which the temperature of the waste gas stream is lowered to below the dew points of the contaminants gases in waste gas. A refrigeration condenser normally provides VOC control efficiency greater than 90%.

Step Two: Eliminate Technically Infeasible Control Options

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of carbon adsorption, condensation, and biofiltration systems are not technically feasible options for this source for the following reasons:

(a) Based on the information reviewed for this BACT determination, the use of a biofiltration system is infeasible because the high temperature exhaust stream from the oven would inhibit microbiological activities. The outlet temperature of the ovens would exceed those in the required temperature range for mesophilic bacteria (nominally less than 106° F) and would kill off the microbes. Additionally, during the periods that the oven is shut-down for normal cleaning operations, the biofiltration system would have to be artificially fed in order to maintain system acclimation. Therefore, this technology is not technically feasible, and no further evaluation will be made.

(b) Based on the information reviewed for this BACT determination, the use of carbon adsorption is infeasible because fats and oils in the oven exhaust clog carbon pores. In addition, the ethanol is difficult to strip from the carbon. Therefore, this technology is not technically feasible, and no further evaluation will be made.

(c) Based on the information reviewed for this BACT determination, the condensation method is infeasible because of the low VOC concentrations and high air flows, temperatures, and moisture content in the oven exhaust. In addition, the fats and oils contained in the exhaust reduce the control efficiency and create sanitation concerns. Therefore, this technology is not technically feasible, and no further evaluation will be made.

The following table summarizes other BACT determinations at similar sources or for similar processes that were identified in the EPA's RACT/BACT/LAER Clearinghouse (RBLC) under Process Type Code 70.550 (Bakeries and Snack Food), as well as IDEM, OAQ permits issued to date. The BACT determinations are arranged in descending order in terms of issuance date.

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Allen Foods, Inc. Elkhart, IN	2013	Bakery Ovens (Bread Line 028) (Bun Line 048)	Catalytic Oxidizer	The VOC emissions from the baking oven 028 and baking oven 048 shall be controlled by a single catalytic oxidizer (029). The overall VOC control efficiency for the catalytic oxidizer (including capture efficiency and destruction efficiency) shall be at least 95%, or the VOC outlet concentration shall not exceed 10 ppmv. The combined VOC emissions from baking oven 028 and the bun line baking oven (048), jointly controlled by catalytic oxidizer 029 and exhausting through vent S17, shall not exceed 4.30 lbs/hr. The Permittee shall operate bread line (Line 028) (consisting of the baking oven and proof box) in accordance with the manufacturer's design and operating specifications. The Permittee shall operate the bun line (Line 048) (consisting of the baking oven and proof box) in accordance with the manufcaturer's design and operating specifications. The source shall perform proof box cleaning operations for the proof box associated with Bread Line 028 on a weekly cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP). The source shall perform proof box cleaning operations for the proof box associated with Bun Line 048 on a weekly cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP).	Indiana Federally Enforceable State Operating Permit Significant Permit Revision SPR 039-32174-00643

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Hartford Bakery, Inc. Evansville, IN	2012	Bun Production Line (Line 3)	None	VOC emission shall be limited to 46.7 tons per twelve (12) consecutive month period. The source shall operate the proof box in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof box on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP).	RBLC ID: IN 0148 Indiana Part 70 Significant Source Modification SSM 163-31953-00040
Maplehurst Bakeries, Inc. Brownsburg, IN	2012	Donut Fryer 6 (Donut Production Line - Moline VI)	None	VOC emission shall be limited to 40.1 tons per twelve (12) consecutive month period. The source shall operate the proof box in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof box on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP).	RBLC ID: IN-0134 Indiana Part 70 Significant Source Modification SSM 063-31357-00031
Maplehurst Bakeries, Inc. Brownsburg, IN	2012	Donut Fryer 8 (Donut Production Line - Moline VIII)	None	VOC emission shall be limited to 60.7 tons per twelve (12) consecutive month period. The source shall operate the proof box in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof box on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP).	RBLC ID: IN-0134 Indiana Part 70 Significant Source Modification SSM 063-31357-00031

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Allen Foods, Inc. Elkhart, IN	2012	Bakery Oven (Bread Line 028)	Catalytic Oxidizer	VOC emissions from the bread oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions shall not exceed 2.29 lbs/hr. The source shall operate the proof box in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof box on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP).	RBLC ID: IN-0124 Indiana Federally Enforceable State Operating Permit SPR 039-29392-00643
The Kroger Company - Indianapolis Bakery Indianapolis, IN	2012	Bakery Oven (Bun Line BU4)	Catalytic Oxidizer	VOC emissions from the bun oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions from the bun oven shall not exceed 2.75 pounds per hour. The source shall operate the proof box in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof box on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP).	Indiana Federally Enforceable State Operating Permit Significant Permit Revision F097-29287-00161

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
White Castle Systems, Inc. Rensselaer, IN	2011	Bakery Oven/ Proof Box	Catalytic Oxidizer	VOC emission from the bread baking oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions from the bread oven shall not exceed 0.54 lbs/hr The source shall operate the proof box in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof box on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP).	RBLC ID: IN-0128 Indiana Minor Source Operating Permit M073-29819-00039
Alpha Baking Co., Inc. LaPorte, IN	2011	Bakery Ovens Proof Boxes	Catalytic Oxidizer	VOC emission from the baking ovens shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. The source shall operate the proof boxes in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof boxes on tiered cleaning schedules in accordance with their Sanitation Standard Operating Procedures (SSOP).	RBLC ID: IN-0132 Indiana Federally Enforceable State Operating Permit F091-28222-00135
Harlan Bakeries, Inc. Avon, IN	2008	Bakery Oven	Catalytic Oxidizer	VOC emissions from the bagel oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions shall not exceed 0.36 lbs/hr.	Indiana Minor Source Operating Permit M063-24103-00059

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Allen Foods, Inc. Elkhart, IN	2006	Bakery Oven	Catalytic Oxidizer	VOC emissions from the bread oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions shall not exceed 2.29 lbs/hr.	RBLC ID: IN-0120 Indiana Federally Enforceable State Operating Permit F039-22633-00643
Holsum of Fort Wayne, Inc. Fort Wayne, IN	2005	Bakery Oven	None	VOC emission shall be limited to 60 tons per twelve (12) consecutive month period	Indiana Part 70 Significant Source Modification SSM 091-27352-00106
The Kroger Company - Indianapolis Bakery Indianapolis, IN	2003	Bakery Oven and Chain Lubricant (Bread Line BD1)	None	VOC emissions shall not exceed 49.0 tons per thirteen (13) consecutive twenty-eight (28) day period.	Indiana Federally Enforceable State Operating Permit Significant Permit Revision F097-16909-00161
Maple Leaf Bakery CA	1998	Bakery Oven	Catalytic Oxidizer	92 % Destruction Removal Efficiency Minimal 600°F Operating Temperature	RBLC ID: CA-0854 Permit No.: 0473-170
Freund Baking Company CA	1997	Bakery Oven	Catalytic Oxidizer	95.4 % Destruction Removal Efficiency	RBLC ID: CA-0859 Permit No.: 328570
Interstate Brands Corporation Indianapolis, IN	1997	Combined Bakery Ovens and Chain Lubricant	None	VOC emissions shall not exceed 95 tons per thirteen (13) consecutive twenty-eight (28) day period.	Indiana Federally Enforceable State Operating Permit F097-7413-00171
Holsum Bakery, Inc. AZ	1996	Bakery Oven	Quencher / Scrubber	81 % Control Efficiency 49.9 tons per year	RBLC ID: AZ-0029 Permit No.:95-0432
KBI, Inc. Morristown, IN	1996	Dough Mixing, Fermentation, and Baking Area	None	VOC emissions shall not exceed a total of 99.9 tons per twelve (12) consecutive month period	Indiana Federally Enforceable State Operating Permit F145-15375-00037
Certified Grocers of California, Ltd CA	1990	Bakery Oven	Catalytic Afterburner	95% Control Efficiency	RBLC ID: CA-0468 Permit Nos.: 228274, 219899
Automatic Rolls of Virginia, Inc. VA	1988	Bakery Oven	None	13.80 pounds per hour 23.00 tons per year	RBLC ID: VA-0110 Permit No.: (7)40761

Step Three: Rank Remaining Control Technologies by Control Effectiveness

The remaining technically feasible options for controlling VOC emissions from the muffin line (Line H) are as follows (listed in descending order of most technically feasible):

Options for VOC Control	Control Efficiency (%)
Catalytic Oxidizer	95%
Thermal Oxidizer	95%
Wet Packed Bed Scrubber	81%

IDEM, OAQ is aware that that the above control technologies may be able to periodically achieve control efficiencies that exceed 95% under certain operating conditions. However, BACT must be achievable on a consistent basis under normal operational conditions. BACT limitations do not necessarily reflect the highest possible control efficiency achievable by the technology on which the emission limitation is based. The permitting authority has the discretion to base the emission limitation on a control efficiency that is somewhat lower than the optimal level. There are several reasons why the permitting authority might choose to do this. One reason is that the control efficiency achievable through the use of the technology may fluctuate so that it would not always achieve its optimal control efficiency. In that case, setting the emission limitation to reflect the highest control efficiency would make violations of the permit unavoidable. To account for this possibility, a permitting authority must be allowed a certain degree of discretion to set the emission limitation at a level that does not necessarily reflect the highest possible control efficiency, but will allow the Permittee to achieve compliance consistently. While we recognize that greater than 95% may be achievable as an average during testing, IDEM, OAQ allows for sources to include a safety factor, or margin of error, to allow for minor variations in the operation of the emission units and the control device.

Step Four: Evaluate Top Control Alternatives

Further evaluation including economic, energy and environmental impacts are required for controlling VOC emissions from the muffin line (Line H). Annualized costs were determined in accordance with the EPA guidance (EPA's Office of Air Quality Planning and Standards Control Cost Manual), with other relevant information provided by the respective equipment vendors, inputs from plant personnel, and engineering judgment.

(a) Catalytic Oxidizer

The source proposed three possibilities for controlling potential VOC emissions from the muffin lines (Line B and Line H):

(1) Control the Proof Box and Muffin Griddle:

The first option evaluated was to control the combined VOC emissions from the proof boxes and the natural gas-fired muffin griddles. Options evaluated included controlling Line B only, Line H only, and both Line B and Line H. This option would include the installation of a clean room surrounding the proof box as well as the conveyor system between the proof box and the griddle. Additional air handlers would be required to direct airflow to a catalytic oxidizer, which would be installed after the griddle.

(2) Control the Proof Box Only:

The second option evaluated was to control VOC emissions from only the proof box. Options evaluated included controlling Line B proof box only, Line H proof box only, and both Line B and Line H proof boxes. This option would include the installation of clean room surrounding the proof box as well as the conveyor system between the proof box and the griddle. Additional air handlers would be required to direct airflow to a catalytic oxidizer.

(3) Control the Muffin Griddle Only:

The third option evaluated was to control the VOC emissions from only the natural gas-fired muffin griddle. Options evaluated included controlling Line B muffin griddle only, Line H muffin griddle only, and both Line B and Line H muffin griddles. This option would include the installation of a catalytic oxidizer to control emissions from only the griddle.

Note: The cost benefit analyses, included as Appendix C, evaluate the costs associated with using a single catalytic oxidizer to control the emission units associated with Line B, using a single catalytic oxidizer to control emission units associated with Line H, and using a single catalytic oxidizer to control emission units associated with both Line B and Line H.

(b) Thermal Oxidizer

Based on information reviewed for this BACT determination, the costs associated with installing a thermal oxidizer were not evaluated since the cost of the technology is higher than that of a catalytic oxidizer. A thermal oxidizer would require a higher operating temperature and more fuel than a catalytic oxidizer, thus increasing the costs associated with this control method. Therefore, no further evaluation will be made.

(c) Wet Packed Bed Scrubber

Based on information reviewed for this BACT determination, the costs associated with installing a wet packed bed scrubber were not evaluated since the cost of the technology is significantly higher than that of a catalytic oxidizer. A wet scrubber would require substantial amounts of water requiring treatment at a wastewater treatment plant (WWTP). VOCs could potentially volatilize from the wastewater during the transference or conveyance to the WWTP, as well as, during treatment at the WWTP. To avoid this problem, the sewage system and WWTP would need to be designed to minimize the volatilization of VOCs or capture and control VOCs emitted the ambient air. Therefore, no further evaluation will be made.

Pursuant to Section IV.D.2.c of EPA's BACT Guidance Document, costs that are within the range of normal costs for a control method may be reviewed in comparison to similar sources. This comparison may allow for the elimination of a technologically- and otherwise economically-feasible control option, provided that the costs of pollutant removal for the subject source are unduly high when compared to the costs borne by sources in recent BACT determinations.

The technologically-feasible options for controlling VOC emissions from the bakery lines and the costs estimated for New Horizons Baking Company to purchase and operate the control device(s) is summarized in Appendix C.

Facility	Cost for Controlling VOCs from Entire Line(s) (Proof Box* & Muffin Griddle) ($ / Ton Removed)	Cost for Controlling VOCs from Proof Box(es)* Only ($ / Ton Removed)	Cost for Controlling VOCs from Muffin Griddle(s) Only ($ / Ton Removed)
Muffin Line (Line B)	$15,903	$75,092	$11,160
Muffin Line (Line H)	$16,838	$79,526	$11,953
Muffin Lines (Line B & Line H)	$13,150	$62,100	$7,482

Note:
*Costs associated with controlling proof boxes are theoretical. These types of facilities have never been required to control VOC emissions.

(a) Cost Analyses for Controlling the Muffin Griddles and Proof Boxes with a Catalytic Oxidizer:

(1) The cost associated with controlling the combined 35.16 tons of VOC emitted from Line B's muffin griddle (Unit B) and proof box (Line B Proof Box) has been determined to be $15,903 per ton of VOC removed, using a single catalytic oxidizer.

(2) The cost associated with controlling the combined 31.65 tons of VOC emitted from Line H's muffin griddle (Unit H) and proof box (Line H Proof Box) has been determined to be $16,838 per ton of VOC removed, using a single catalytic oxidizer.

(3) The cost associated with controlling the combined 66.81 tons of VOC emitted from both the Line B and Line H muffin lines (consisting of Unit B, Unit H, Line B Proof Box, and Line H Proof Box) has been determined to be $13,150 per ton of VOC removed, using a single catalytic oxidizer.

Note: The VOC emissions from natural gas combustion are included in the tonnages of VOC listed above.

(b) Cost Analyses for Controlling Only the Proof Boxes with a Catalytic Oxidizer:

(1) The cost associated with controlling the 7.45 tons of VOC emitted from only the Line B Proof Box has been determined to be $75,092 per ton of VOC removed, using a single catalytic oxidizer.

(2) The cost associated with controlling the 6.70 tons of VOC emitted from only the Line H Proof Box has been determined to be $79,526 per ton of VOC removed, using a single catalytic oxidizer.

(3) The cost associated with controlling the combined 14.15 tons of VOC emitted from both the proof boxes (Line B Proof Box and Line H Proof Box) has been determined to be $62,100, using a single catalytic oxidizer.

(c) Cost Analyses for Controlling Only the Muffin Griddles with a Catalytic Oxidizer:

(1) The cost associated with controlling the 27.71 tons of VOC emitted from only the Line B muffin griddle (Unit B) has been determined to be $11,160 per ton of VOC removed, using a single catalytic oxidizer.

(2) The cost associated with controlling the 24.95 tons of VOC emitted from only the Line H muffin griddle (Unit H) has been determined to be $11,953 per ton of VOC removed, using a single catalytic oxidizer.

(3) The cost associated with controlling the combined 52.66 tons of VOC emitted from both the Line B and Line H muffin griddles (Unit B and Unit H) has been determined to be $7,482 per ton of VOC removed, using a single catalytic oxidizer.

Note: The VOC emissions from natural gas combustion are included in the tonnages of VOC listed above.

The source proposes that requiring add-on controls for the muffin griddles and/or proof boxes would place them at a significant economic disadvantage in the baking industry. The source proposes to operate the each muffin line, consisting of a muffin griddle and proof box, in accordance with the manufacturer's design and operating specifications, and to sanitize the proof boxes in accordance with accepted industry procedures and practices along with Food and Drug Administration requirements.

Step Five: Select BACT

IDEM, OAQ has determined that the best available control technology (BACT) to control VOC emissions from the muffin lines (Line B and Line H), shall be as follows:

Muffin Line (Line B)

(a) VOC emissions from the muffin line, identified as Line B (consisting of the muffin griddle (Unit B) and the proof box (Line B Proof Box)), shall not exceed 35.16 tons per twelve (12) consecutive month period.

(b) The source shall operate Line B (consisting of the muffin griddle (Unit B) and proof box (Line B Proof Box)) in accordance the manufacturer's design and operating specifications.

(c) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box (Line B Proof Box) and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

Weekly Cleaning Procedure:

(1) Clean inner housing top and bottom using a hand brush and knife scraper;
(2) Clean inner conveyor shafts and bearing housings. Use a clean cloth for removal of residual debris and any bearing over lubrication;
(3) Clean inner door ledge framework using a hand brush and clean cloth;
(4) Wash inner housing;
(5) Wash inner conveyor shafts and bearing housings;
(6) Wash inner door ledge framework;
(7) Clean debris from lower proofer doors using a hand brush and clean cloth. If there are problem areas on the doors, a knife scraper can be used to remove encrusted debris.
(8) Wash lower proofer doors.

Muffin Line (Line H)

(a) VOC emissions from the muffin line, identified as Line H (consisting of the muffin griddle (Unit H) and the proof box (Line H Proof Box)), shall not exceed 31.65 tons per twelve (12) consecutive month period.

(b) The source shall operate Line H (consisting of the muffin griddle (Unit H) and proof box (Line H Proof Box)) in accordance the manufacturer's design and operating specifications.

(c) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box (Line H Proof Box) and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

Weekly Cleaning Procedure:

(1) Clean inner housing top and bottom using a hand brush and knife scraper;
(2) Clean inner conveyor shafts and bearing housings. Use a clean cloth for removal of residual debris and any bearing over lubrication;
(3) Clean inner door ledge framework using a hand brush and clean cloth;
(4) Wash inner housing;
(5) Wash inner conveyor shafts and bearing housings;
(6) Wash inner door ledge framework;
(7) Clean debris from lower proofer doors using a hand brush and clean cloth. If there are problem areas on the doors, a knife scraper can be used to remove encrusted debris.
(8) Wash lower proofer doors.

Compliance with the above limits and conditions will satisfy the requirements of 326 IAC 8-1-6 (BACT).

IDEM, OAQ Contact

Questions regarding this BACT Analysis can be directed to Jason R. Krawczyk at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5174 or toll free at 1-800-451-6027 extension 4-5174.

Appendix C: Cost Analyses for Control Devices
Controlling the Muffin Line (Line B)

Company Name: New Horizons Baking Company
Address City IN Zip: 700 W. Water Street, Fremont, Indiana 46737
Part 70 Operating Permit Number: T151-31292-00060
Significant Source Modification No.: 151-32848-00060
Reviewer: Jason R. Krawczyk
Date: February 25, 2013

Controlling Emissions from the Muffin Line (Line B)				Units Controlled			Notes
				Option 1 Proof Box and Muffin Griddle	Option 2 Proof Box Only	Option 3 Muffin Griddle Only	
DIRECT COST (Pollution Control Equipment)	**Miscellaneous**	**Unit Cost**		**TOTAL ($)**	**TOTAL ($)**	**TOTAL ($)**	
Direct Purchased Equipment							
Equipment Total (A)	A =			$ 1,300,788.84	$ 1,300,788.84	$ 545,288.84	Capital Cost for catalytic oxidizer based Hartford Bakery BACT analysis* Option 1: Equipment total includes catalytic oxidizer and clean room Option 2: Equipment total includes catalytic oxidizer and clean room Option 3: Equipment total includes catalytic oxidizer only
Instrumentation	0.10	A		Included	Included	Included	Included in Hartford Bakery quote*
Sales Taxes	0.07	A		$91,055	$91,055	$38,170	Indiana sales tax
Freight	0.05	A		Included	Included	Included	Included in Hartford Bakery quote*
Total Equipment Costs (B)	**B =**			**$1,391,844**	**$1,391,844**	**$583,459**	
Direct Installation Cost							
Foundation and Support	0.08	B		$111,348	$111,348	$46,677	EPA Control Cost Manual
Handling and Erection	0.14	B		$194,858	$194,858	$81,684	EPA Control Cost Manual
Piping	0.02	B		$27,837	$27,837	$11,669	EPA Control Cost Manual
Insulation	0.01	B		$13,918	$13,918	$5,835	EPA Control Cost Manual
Electrical	0.04	B		$55,674	$55,674	$23,338	EPA Control Cost Manual
Site Preparation	SP			$0	$0	$0	No costs assumed associated with site preparation (conservative assumption)
Other (Painting)	0.01	B		$13,918	$13,918	$5,835	EPA Control Cost Manual
Total Direct Installation Costs				**$417,553**	**$417,553**	**$175,038**	
TOTAL Direct Investment (TDI) = (Total Equipment Cost + Total Direct Installation Cost)	**TDI =**			**$1,809,397**	**$1,809,397**	**$758,497**	
Indirect Installation Costs							
Engineering and Supervision	0.10	B		$139,184	$139,184	$58,346	EPA Control Cost Manual
Lost Production (for Retrofit Situations Only)				$0	$0	$0	Conservatively assume no lost production
Construction and Field Expenses	0.05	B		$69,592	$69,592	$29,173	EPA Control Cost Manual
Contractor Fees	0.10	B		$139,184	$139,184	$58,346	EPA Control Cost Manual
Start-up	0.02	B		$27,837	$27,837	$11,669	EPA Control Cost Manual
Performance Tests	0.01	B		$13,918	$13,918	$5,835	EPA Control Cost Manual
Overall Contingencies	0.03	B		$41,755	$41,755	$17,504	EPA Control Cost Manual
Total Indirect Installation Costs (TIC)	**TIC =**			**$431,472**	**$431,472**	**$180,872**	
TOTAL CAPITAL INVESTMENT (TCI) = (TDI +TIC)	**TCI =**			**$2,240,869**	**$2,240,869**	**$939,369**	
ANNUAL OPERATION & MAINTENANCE							
Direct Operating Costs (DA)							
Operating Labor	0.5 hr/shift	$26.46		$14,447	$14,447	$14,447	Cost per hour based on Hartford Bakery BACT analysis*
Supervisor	15% of operator	0.15		$2,167	$2,167	$2,167	EPA Control Cost Manual
Maintenance Labor	0.5 hr/shift	$34.17		$18,657	$18,657	$18,657	Cost per hour based on Hartford Bakery BACT analysis*
Maintenance Parts	100% of Labor			$18,708	$18,708	$18,708	EPA Control Cost Manual
Gas (Equipment Ratings)	$8.256/mmbtu			$20,395	$20,395	$20,395	Utility costs are based on Hartford Bakery's quote for a catalytic oxidizer. A catalytic oxidizer installed on New Horizons Line B would need to be sized for a higher air flow than the Hartford catalytic oxidizer. Therefore gas and electric costs would be higher for New Horizons and these estimates are conservative*
Electricity (Equipment Ratings)	$0.0742/kwh			$17,030	$17,030	$17,030	
Water				$0	$0	$0	No costs associated with water for catalytic oxidizer
Water Surcharge				$0	$0	$0	No costs associated with water surcharge
Replacement Parts				$0	$0	$0	No costs associated with replacement parts (including catalyst) conservatively assumed for this analysis
Total Direct Operating Costs (DA)	**DA =**			**$91,404**	**$91,404**	**$91,404**	
Indirect Operating Costs (IC)							
Overhead	60% of sum of operating, maintenance labor and materials			$31,087	$31,087	$31,087	EPA Control Cost Manual
Administrative Charges	0.02	TCI		$44,817	$44,817	$18,787	EPA Control Cost Manual
Property Tax	0.01	TCI		$22,409	$22,409	$9,394	EPA Control Cost Manual
Insurance	0.01	TCI		$22,409	$22,409	$9,394	EPA Control Cost Manual
Capital Recovery Cost Factor (Assumes 7% interest over 10 years)	$[i*(1+i)^n]/[(1+i)^n-1]$	0.1424		$319,049	$319,049	$133,745	EPA Control Cost Manual
Capital Recovery Cost	Factor * (TCI-1.08(Catalyst Costs)	0.1424					Catalyst costs conservatively assumed to be $0.
Total Indirect Operating Costs (IA)	**IA =**			**$120,722**	**$120,722**	**$68,662**	
Heat Recovery Credits				$0	$0	$0	No Heat Recovery Credits assumed for this analysis
Total Operating Costs (DA + IA - Heat Recovery Credits)	**TOC =**			**$212,126**	**$212,126**	**$160,066**	
Total Annualized Cost (Capital Recovery Cost + TOC)	**TAC =**			**$531,175**	**$531,175**	**$293,811**	
Tons VOC PTE =				35.16	7.45	27.71	Option 1 = Emissions from muffin griddle, proof box, and natural gas combustion. Option 2 = Emissions from proof box. Option 3 = Emissions from muffin griddle and natural gas combustion
Tons VOC Removed @ 95% =				33.40	7.07	26.33	
Cost per Ton VOC Removed (TAC / Tons VOC Removed) =				**$15,903**	**$75,092**	**$11,160**	

Notes

*Costs based Hartford Bakery (Evansville, IN) BACT analysis (see Significant Source Modification No. 163-31953-00040 issued August 21, 2012). For this BACT analysis, the capital cost of the catalytic oxidizer was adjusted based on the air flow rates.

$280,700 Hartford capital cost estimate
4,000 scfm, air flow of catalytic oxidizer in Hartford quote
10,969 scfm, air flow rate of the muffin griddle stack at New Horizons Baking Company

The cost of a catalytic oxidizer for New Horizons is calculated using the sixth tenths rule or "power rule" which is a technique for scaling cost data as provided in the following Ohio EPA guidance document:
http://www.epa.state.oh.us/portals/27/engineer/eguides/guide46.pdf
$ 514,169.89 Cost in 2010 dollars for a catalytic oxidizer
218.1 CPI for 2010
231.3 CPI through October 2012
Consumer Price Index Values were obtained from the following site
U.S. Department Of Labor - Bureau of Labor Statistics, Consumer Price Index, ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt
$ 545,288.84 Capital cost of catalytic oxidizer in 2012 dollars

The cost of the clean room is based on $/square foot. New Horizons estimates that 2,700 sq ft would be necessary to enclose the proof box on the muffin line. The following site is used to estimate the cost of the clean room:
http://www.idc-ch2m.com/services/cleanroom/cleanroom_cost.asp
$755,500 cost of class 1000 clean room that is 2,700 sq ft

EPA Control Cost Manual factors are from Section 3.2 VOC Destruction Controls Chapter 2, Table 2.8 for Incinerators of the Sixth Edition of the EPA Air Pollution Control Cost Manual (January 2002)
http://www.epa.gov/ttncatc1/dir1/c_allchs.pdf

Appendix C: Cost Analyses for Control Devices
Controlling the Muffin Line (Line H)

Company Name: New Horizons Baking Company
Address City IN Zip: 700 W. Water Street, Fremont, Indiana 46737
Part 70 Operating Permit Number: T151-31292-00060
Significant Source Modification No.: 151-32848-00060
Reviewer: Jason R. Krawczyk
Date: February 25, 2013

Controlling Emissions from the Muffin Line (Line H)				Units Controlled			Notes
				Option 1 Proof Box and Oven	Option 2 Proof Box Only	Option 3 Oven Only	
DIRECT COST (Pollution Control Equipment)	**Miscellaneous**	**Unit Cost**		**TOTAL ($)**	**TOTAL ($)**	**TOTAL ($)**	
Direct Purchased Equipment							
Equipment Total (A)	A =			$ 1,221,584.66	$ 1,221,584.66	$ 511,884.66	Capital Cost for catalytic oxidizer based Hartford Bakery BACT analysis* Option 1: Equipment total includes catalytic oxidizer and clean room Option 2: Equipment total includes catalytic oxidizer and clean room Option 3: Equipment total includes catalytic oxidizer only
Instrumentation		0.10	A	Included	Included	Included	Included in Hartford Bakery quote*
Sales Taxes		0.07	A	$85,511	$85,511	$35,832	Indiana sales tax
Freight		0.05	A	Included	Included	Included	Included in Hartford Bakery quote*
Total Equipment Costs (B)	**B =**			**$1,307,096**	**$1,307,096**	**$547,717**	
Direct Installation Cost							
Foundation and Support		0.08	B	$104,568	$104,568	$43,817	EPA Control Cost Manual
Handling and Erection		0.14	B	$182,993	$182,993	$76,680	EPA Control Cost Manual
Piping		0.02	B	$26,142	$26,142	$10,954	EPA Control Cost Manual
Insulation		0.01	B	$13,071	$13,071	$5,477	EPA Control Cost Manual
Electrical		0.04	B	$52,284	$52,284	$21,909	EPA Control Cost Manual
Site Preparation		SP		$0	$0	$0	No costs assumed associated with site preparation (conservative assumption)
Other (Painting)		0.01	B	$13,071	$13,071	$5,477	EPA Control Cost Manual
Total Direct Installation Costs				**$392,129**	**$392,129**	**$164,315**	
TOTAL Direct Investment (TDI) = (Total Equipment Cost + Total Direct Installation Cost)	**TDI =**			**$1,699,224**	**$1,699,224**	**$712,032**	
Indirect Installation Costs							
Engineering and Supervision		0.10	B	$130,710	$130,710	$54,772	EPA Control Cost Manual
Lost Production (for Retrofit Situations Only)				$0	$0	$0	Conservatively assume no lost production
Construction and Field Expenses		0.05	B	$65,355	$65,355	$27,386	EPA Control Cost Manual
Contractor Fees		0.10	B	$130,710	$130,710	$54,772	EPA Control Cost Manual
Start-up		0.02	B	$26,142	$26,142	$10,954	EPA Control Cost Manual
Performance Tests		0.01	B	$13,071	$13,071	$5,477	EPA Control Cost Manual
Overall Contingencies		0.03	B	$39,213	$39,213	$16,431	EPA Control Cost Manual
Total Indirect Installation Costs (TIC)	**TIC =**			**$405,200**	**$405,200**	**$169,792**	
TOTAL CAPITAL INVESTMENT (TCI) = (TDI +TIC)	**TCI =**			**$2,104,424**	**$2,104,424**	**$881,824**	
ANNUAL OPERATION & MAINTENANCE							
Direct Operating Costs (DA)							
Operating Labor	0.5 hr/shift	$26.46		$14,447	$14,447	$14,447	Cost per hour based on Hartford Bakery BACT analysis*
Supervisor	15% of operator	0.15		$2,167	$2,167	$2,167	EPA Control Cost Manual
Maintenance Labor	0.5 hr/shift	$34.17		$18,657	$18,657	$18,657	Cost per hour based on Hartford Bakery BACT analysis*
Maintenance Parts	100% of Labor			$18,708	$18,708	$18,708	EPA Control Cost Manual
Gas (Equipment Ratings)		$8.256/mmbtu		$20,395	$20,395	$20,395	Utility costs are based on Hartford Bakery's quote for a catalytic oxidizer. A catalytic oxidizer installed on New Horizons New Muffin Line would need to be sized for a higher air flow than the Hartford catalytic oxidizer. Therefore gas and electric costs would be higher for New Horizons and these estimates are conservative*
Electricity (Equipment Ratings)		$0.0742/kwh		$17,030	$17,030	$17,030	
Water				$0	$0	$0	No costs associated with water for catalytic oxidizer
Water Surcharge				$0	$0	$0	No costs associated with water surcharge
Replacement Parts				$0	$0	$0	No costs associated with replacement parts (including catalyst) conservatively assumed for this analysis
Total Direct Operating Costs (DA)	**DA =**			**$91,404**	**$91,404**	**$91,404**	
Indirect Operating Costs (IC)							
Overhead	60% of sum of operating, maintenance labor and materials			$31,087	$31,087	$31,087	EPA Control Cost Manual
Administrative Charges		0.02	TC	$42,088	$42,088	$17,636	EPA Control Cost Manual
Property Tax		0.01	TC	$21,044	$21,044	$8,818	EPA Control Cost Manual
Insurance		0.01	TC	$21,044	$21,044	$8,818	EPA Control Cost Manual
Capital Recovery Cost Factor (Assumes 7% interest over 10 years)	$[i*(1+i)^n]/[(1+i)^n-1]$	0.1424		$299,623	$299,623	$125,552	EPA Control Cost Manual
Capital Recovery Cost	Factor * (TCI-1.08(Catalyst	0.1424					Catalyst costs conservatively assumed to be $0.
Total Indirect Operating Costs (IA)	**IA =**			**$115,264**	**$115,264**	**$66,360**	
Heat Recovery Credits				$0	$0	$0	No Heat Recovery Credits assumed for this analysis
Total Operating Costs (DA + IA - Heat Recovery Credits)	**TOC =**			**$206,668**	**$206,668**	**$157,764**	
Total Annualized Cost (Capital Recovery Cost + TOC)	**TAC =**			**$506,291**	**$506,291**	**$283,316**	
Tons VOC PTE =				31.65	6.70	24.95	Option 1 = Emissions from oven, proof box, and natural gas combustion. Option 2 = Emissions from proof box. Option 3 = Emissions from oven and natural gas combustion
Tons VOC Removed @ 95% =				30.07	6.37	23.70	
Cost per Ton VOC Removed (TAC / Tons VOC Removed) =				**$16,838**	**$79,526**	**$11,953**	

Notes

*Costs based Hartford Bakery (Evansville, IN) BACT analysis (see Significant Source Modification No. 163-31953-00040 issued August 21, 2012). For this BACT analysis, the capital cost of the catalytic oxidizer was adjusted based on the air flow rates.

$280,700 Hartford capital cost estimate
4,000 scfm, air flow of catalytic oxidizer in Hartford quote
9,872 scfm, air flow rate of the new muffin griddle stack at New Horizons Baking Company

The cost of a catalytic oxidizer for New Horizons is calculated using the sixth tenths rule or "power rule" which is a technique for scaling cost data as provided in the following Ohio EPA guidance document:
http://www.epa.state.oh.us/portals/27/engineer/eguides/guide46.pdf

$ 482,672.04 Cost in 2010 dollars for a catalytic oxidizer
218.1 CPI for 2010
231.3 CPI through October 2012

Consumer Price Index Values were obtained from the following site
U.S. Department Of Labor - Bureau of Labor Statistics, Consumer Price Index, ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt

$ 511,884.66 Capital cost of catalytic oxidizer in 2012 dollars

The cost of the clean room is based on $/square foot. New Horizons estimates that 2,430 sq ft would be necessary to enclose the proof box on the muffin line. The following site is used to estimate the cost of the clean room:
http://www.idc-ch2m.com/services/cleanroom/cleanroom_cost.asp

$709,700 cost of class 1000 clean room that is 2,430 sq ft

EPA Control Cost Manual factors are from Section 3.2 VOC Destruction Controls Chapter 2, Table 2.8 for Incinerators of the Sixth Edition of the EPA Air Pollution Control Cost Manual (January 2002)
http://www.epa.gov/ttncatc1/dir1/c_allchs.pdf

Appendix C: Cost Analyses for Control Devices
Controlling Muffin Lines (Line B and Line H)

Company Name: New Horizons Baking Company
Address City IN Zip: 700 W. Water Street, Fremont, Indiana 46737
Part 70 Operating Permit Number: T151-31292-00060
Significant Source Modification No.: 151-32848-00060
Reviewer: Jason R. Krawczyk
Date: February 25, 2013

Controlling Emissions from the Muffin Lines B & H, using a Single Catalytic Oxidizer					Units Controlled: Option 1 Proof Boxes and Ovens	Units Controlled: Option 2 Proof Boxes Only	Units Controlled: Option 3 Ovens Only	Notes
DIRECT COST (Pollution Control Equipment)		**Miscellaneous**		**Unit Cost**	**TOTAL ($)**	**TOTAL ($)**	**TOTAL ($)**	
Direct Purchased Equipment								Capital Cost for catalytic oxidizer based on Hartford Bakery BACT Analysis*
	Equipment Total (A)	A =			$ 2,266,654.31	$ 2,266,654.31	$ 801,454.31	Option 1: Equipment total includes catalytic oxidizer and clean rooms Option 2: Equipment total includes catalytic oxidizer and clean rooms Option 3: Equipment total includes catalytic oxidizer only **Note:** The cost for additional duct work to route emissions from two muffin lines to a single control not considered (conservative assumption).
	Instrumentation	0.10	A		Included	Included	Included	Included in Hartford Bakery quote*
	Sales Taxes	0.07	A		$158,666	$158,666	$56,102	Indiana sales tax
	Freight	0.05	A		Included	Included	Included	Included in Hartford Bakery quote*
Total Equipment Costs (B)		**B =**			**$2,425,320**	**$2,425,320**	**$857,556**	
Direct Installation Cost								
	Foundation and Support	0.08	B		$194,026	$194,026	$68,604	EPA Control Cost Manual
	Handling and Erection	0.14	B		$339,545	$339,545	$120,058	EPA Control Cost Manual
	Piping	0.02	B		$48,506	$48,506	$17,151	EPA Control Cost Manual
	Insulation	0.01	B		$24,253	$24,253	$8,576	EPA Control Cost Manual
	Electrical	0.04	B		$97,013	$97,013	$34,302	EPA Control Cost Manual
	Site Preparation	SP			$0	$0	$0	No costs assumed associated with site preparation (conservative assumption)
	Other (Painting)	0.01	B		$24,253	$24,253	$8,576	EPA Control Cost Manual
Total Direct Installation Costs					**$727,596**	**$727,596**	**$257,267**	
TOTAL Direct Investment (TDI) = (Total Equipment Cost + Total Direct Installation Cost)		**TDI =**			**$3,152,916**	**$3,152,916**	**$1,114,823**	
Indirect Installation Costs								
	Engineering and Supervision	0.10	B		$242,532	$242,532	$85,756	EPA Control Cost Manual
	Lost Production (for Retrofit Situations Only)				$0	$0	$0	Conservatively assumes no lost production
	Construction and Field Expenses	0.05	B		$121,266	$121,266	$42,878	EPA Control Cost Manual
	Contractor Fees	0.10	B		$242,532	$242,532	$85,756	EPA Control Cost Manual
	Start-up	0.02	B		$48,506	$48,506	$17,151	EPA Control Cost Manual
	Performance Tests	0.01	B		$24,253	$24,253	$8,576	EPA Control Cost Manual
	Overall Contingencies	0.03	B		$72,760	$72,760	$25,727	EPA Control Cost Manual
Total Indirect Installation Costs (TIC)		**TIC =**			**$751,849**	**$751,849**	**$265,842**	
TOTAL CAPITAL INVESTMENT (TCI) = (TDI +TIC)		**TCI =**			**$3,904,765**	**$3,904,765**	**$1,380,665**	
ANNUAL OPERATION & MAINTENANCE								
Direct Operating Costs (DA)								
	Operating Labor	0.5 hr/shift		$26.46	$14,447	$14,447	$14,447	Cost per hour based on Hartford Bakery BACT analysis*
	Supervisor	15% of operator		0.15	$2,167	$2,167	$2,167	EPA Control Cost Manual
	Maintenance Labor	0.5 hr/shift		$34.17	$18,657	$18,657	$18,657	Cost per hour based on Hartford Bakery BACT analysis*
	Maintenance Parts	100% of Labor			$18,708	$18,708	$18,708	EPA Control Cost Manual
	Gas (Equipment Ratings)			$8.256/mmbtu	$20,395	$20,395	$20,395	Utility costs are based on Hartford Bakery's quote for a catalytic oxidizer. A catalytic oxidizer installed on New Horizons existing and proposed Muffin Lines would need to be sized for a higher air flow than the Hartford catalytic oxidizer. Therefore gas and electric costs would be higher for New Horizons and these estimates are conservative*
	Electricity (Equipment Ratings)			$0.0742/kwh	$17,030	$17,030	$17,030	
	Water				$0	$0	$0	No costs associated with water for catalytic oxidizer
	Water Surcharge				$0	$0	$0	No costs associated with water surcharge
	Replacement Parts				$0	$0	$0	No costs associated with replacement parts (including catalyst) conservatively assumed for this analysis
Total Direct Operating Costs (DA)		**DA =**			**$91,404**	**$91,404**	**$91,404**	
Indirect Operating Costs (IC)								
	Overhead	60% of sum of operating, maintenance labor and materials			$31,087	$31,087	$31,087	EPA Control Cost Manual
	Administrative Charges			0.02 TC	$78,095	$78,095	$27,613	EPA Control Cost Manual
	Property Tax			0.01 TC	$39,048	$39,048	$13,807	EPA Control Cost Manual
	Insurance			0.01 TC	$39,048	$39,048	$13,807	EPA Control Cost Manual
	Capital Recovery Cost Factor (Assumes 7% interest over 10 years)	$[i*(1+i)^n]/[(1+i)^n-1]$		0.1424	$555,951	$555,951	$196,576	EPA Control Cost Manual
	Capital Recovery Cost	Factor * (TCI-1.08(Catalyst		0.1424				Catalyst costs conservatively assumed to be $0.
Total Indirect Operating Costs (IA)		**IA =**			**$187,278**	**$187,278**	**$86,314**	
	Heat Recovery Credits				$0	$0	$0	No Heat Recovery Credits assumed for this analysis
Total Operating Costs (DA + IA - Heat Recovery Credits)		**TOC =**			**$278,682**	**$278,682**	**$177,718**	
Total Annualized Cost (Capital Recovery Cost + TOC)		**TAC =**			**$834,632**	**$834,632**	**$374,293**	
Tons VOC PTE =					66.81	14.15	52.66	Option 1 = Emissions from ovens, proof boxes, and natural gas combustion. Option 2 = Emissions from proof boxes. Option 3 = Emissions from ovens and natural gas combustion.
Tons VOC Removed @ 95% =					63.47	13.44	50.03	
Cost per Ton VOC Removed (TAC / Tons VOC Removed) =					**$13,150**	**$62,100**	**$7,482**	

Notes

*Costs based Hartford Bakery (Evansville, IN) BACT analysis (see Significant Source Modification No. 163-31953-00040 issued August 21, 2012). For this BACT analysis, the capital cost of the catalytic oxidizer was adjusted based on the air flow rates.

$280,700 Hartford capital cost estimate
4,000 scfm, air flow of catalytic oxidizer in Hartford quote
20,841 scfm, combined air flow rate of the existing and new muffin griddle stacks at New Horizons Baking Company

The cost of a catalytic oxidizer for New Horizons is calculated using the sixth tenths rule or "power rule" which is a technique for scaling cost data as provided in the following Ohio EPA guidance document:
http://www.epa.state.oh.us/portals/27/engineer/eguides/guide46.pdf

$ 755,716.32 Cost in 2010 dollars for a catalytic oxidizer
218.1 CPI for 2010
231.3 CPI through October 2012

Consumer Price Index Values were obtained from the following site
U.S. Department Of Labor - Bureau of Labor Statistics, Consumer Price Index, ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt

$ 801,454.31 Capital cost of catalytic oxidizer in 2012 dollars

The cost of the Line B clean room is based on $/square foot. New Horizons estimates that 2,700 sq ft would be necessary to enclose the proof box on Line B. The following site is used to estimate the cost of the clean room:
http://www.idc-ch2m.com/services/cleanroom/cleanroom_cost.asp

$755,500 cost of class 1000 clean room that is 2,700 sq ft

The cost of the Line H clean room is based on $/square foot. New Horizons estimates that 2,430 sq ft would be necessary to enclose the proof box on Line H. The following site is used to estimate the cost of the clean room:
http://www.idc-ch2m.com/services/cleanroom/cleanroom_cost.asp

$709,700 cost of class 1000 clean room that is 2,430 sq ft

EPA Control Cost Manual factors are from Section 3.2 VOC Destruction Controls Chapter 2, Table 2.8 for Incinerators of the Sixth Edition of the EPA Air Pollution Control Cost Manual (January 2002)
http://www.epa.gov/ttncatc1/dir1/c_allchs.pdf

Appendix C: Cost Analyses for Control Devices
Consumer Price Index

Company Name: New Horizons Baking Company
Address City IN Zip: 700 W. Water Street, Fremont, Indiana 46737
Part 70 Operating Permit Number: T151-31292-00060
Significant Source Modification No.: 151-32848-00060
Reviewer: Jason R. Krawczyk
Date: February 25, 2013

Consumer Price Index[a]	
1988	118.3
1995	152.4
1996	156.9
1997	160.5
1998	163
1999	166.6
2000	172.2
2001	177.1
2002	179.9
2003	184
2004	188.9
2005	195.3
2006	201.6
2007	206.6
2008	215.3
2009	214.5
2010	218.1
2011	224.9
2012[b]	231.3

[a] U.S. Department Of Labor - Bureau of Labor Statistics, Consumer Price Index, ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt

[b] 2012 CPI through October 2012

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

Matt Bowers
New Horizons Baking Company
700 Water St
Fremont, IN 46737

Re: Public Notice
New Horizons Baking Company
Permit Level: Title V
Permit #151-32848-00060 &151-31292-00060

Dear Mr. Bowers:

Enclosed is a copy of your draft Title V, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has submitted the draft permit package to the Fremont Public Library, 2145 E North St POB 7 in Fremont, IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper. The OAQ has requested that the *Herald Republican in Angola, IN April 11.*

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Jason Krawczyk, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 3-0870 or dial (317) 233-0870.

Sincerely,

Debra Pabst
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover letter. dot 3/27/08

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

Herald Republican
P.O. Box 180
Angola, Indiana 46703

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for «company», «county» County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than «Confirmedpublishdate».

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call «admincontact» at 800-451-6027 and ask for extension «extension» or dial 317-23«extension».

Sincerely,

«admincontact»
Permit Branch
Office of Air Quality

cc: Pat Cuzzort: OAQ Billing, Licensing and Training Section
Permit Level: «permitlevel»
Permit Number: «permitnumber»

Enclosure
PN Newspaper.dot 3/27/08

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

To: Fremont Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: New Horizons Baking Company
Permit Number: 151-32848-00060 151-31292-00060

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

If you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library.dot 03/27/08

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

Notice of Public Comment

New Horizons Baking Company
151-31292-00060 & 151-32848-00060

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover.dot 3/27/08

Mail Code 61-53

IDEM Staff	DPABST 4/8/2013 New Horizons Baking Company 151-31292-00060 & 151-32848-00060 (Draft)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Matt Bowers New Horizons Baking Company 700 W Water St Fremont IN 46737 (Source CAATS)									
2		Steuben County Board of Commissioners 317 S Wayne Suite 2H Angola IN 46703 *(Local Official)*									
3		Steuben County Health Department 317 S. Wayne St, Community Center Suite 3-A Angola IN 46703-1938 *(Health Department)*									
4		Mr. Steve Christman NISWMD 2320 W 800 S, P.O. Box 370 Ashley IN 46705 *(Affected Party)*									
5		Fremont Public Library 2145 E North St, P.O. Box 7 Fremont IN 46737-0007 *(Library)*									
6		Fremont Town Council PO Box 10, 204 N. Coffin Street Fremont IN 47432 *(Local Official)*									
7		Mr. Diane Hanson 490 E 300 N Angola IN 46703 *(Affected Party)*									
8		Orland Town Council P.O. Box 445 Orland IN 46776 *(Local Official)*									
9		Ms. Tammy Endlish Endlish Environmental 503 Berkshire Ct Huron OH 44839 *(Consultant)*									
10											
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13											
14											
15											

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